DOCUMENT RESUME

ED 174 648 TM 009 464

TITLE	The Effects of Coaching on Standardized Admission Examinations. Staff Memorandum of the Boston Regional Office of the Federal Trade Commission.
INSTITUTION	Federal Trade Commission, Washington, D.C. Bureau of Consumer Protection.
PUB DATE	Sep 78
NOTE	192p.; Data tables may not reproduce legibly because of the poor print quality of the original document; The technical appendices were not publically available as of August, 1979; For related document, see TM 009 465
AVAILABLE FROM	Public Reference Branch, Room 130, Federal Trade Commission, Washington, D.C. 20580 (no charge)
EDRS PRICE	MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	Achievement Gains; *College Entrance Examinations; Graduate Study; Higher Education; Improvement Programs; Legal Education; Predictive Validity; *Program Effectiveness; Racial Differences; *Scores; Senior High Schools; Testing Problems; *Test Wiseness; *Tutorial Programs
IDENTIFIERS	Coaching Schools; Law School Admission Test; *Scholastic Aptitude Test; *Test Coaching

ABSTRACT

A non-experimental design was used to determine if scores of students enrolled in specified major coaching schools were significantly higher than scores of comparable uncoached groups. Score increases at two Scholastic Aptitude Test (SAT) coaching schools and Law School Admission Test (LSAT) schools were compared. Over 1,400 SAT examinees and 31,000 LSAT examinees, administered these tests between 1974 and 1977, were involved. Comparisons were reported by study subgroup: uncoached first-time examinees; coached first-time examinees; uncoached second-time examinees; second-time examinees coached before the first test; and second-time examinees coached between test administrations. Results indicated that coaching was significantly effective in raising SAT scores. LSAT coaching was marginally effective, possibly because of the abnormally large control group increases and the relatively low correlation between grade point average and LSAT scores. However, the Federal Trade Commission acknowledges that there are "several major flaws in the data analysis, making the results unreliable." (The history of both tests, an analysis of coaching research; a description of the sales, tuition costs, and claims of major coaching schools; extensive graphs of test score data; and case histories of 17 coached LSAT examinees are included). (CP)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U S DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

[redacted] OF THE BOSTON REGIONAL OFFICE

[redacted] THE FEDERAL TRADE COMMISSION

THE EFFECTS OF COACHING ON STANDARDIZED ADMISSION EXAMINATIONS

SEPTEMBER 1978

[redacted]

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY.

NOTICE TO RECIPIENTS OF THE BOSTON REGIONAL OFFICE REPORT ON THE EFFECTS OF COACHING ON STANDARDIZED ADMISSION EXAM.

The attached "Staff Memorandum on the Effects of Coaching on Standardized Admission Examinations," prepared by the Boston Regional Office of the Federal Trade Commission, has several major flaws in the data analysis, making the results unreliable. Brief explanations of each of the major flaws are described below.

In this report standardized exam scores (Scholastic Aptitutde Test, or SAT, and Law School Admission Test, or LSAT) are compared for groups of coached and uncoached students without controlling for differences which may exist in personal and demographic characteristics of the students in the two groups. Subsequent analysis has determined that there are important differences between the coached and uncoached groups, making it impossible to attribute any observed differences in SAT scores to coaching.

To illustrate, students who are coached for the SAT have, on average, higher grades than students who are not coached. It is not possible to know, without controlling for grades, if SAT score differences between the two groups are due to coaching or to the differences in ability reflected in such factors as past school performance.

In addition to failing to use the data available to control for differences in personal and demographic characteristics of the students, the results reported cannot be evaluated because the report fails to provide tests of statistical significance which are necessary to interpret the results. Because the report fails to provide these important statistics, one cannot determine if the results reported are meaningful or are merely due to chance.

Another defect in the report concerns the method used to present the findings from the data analysis. This is especially true for the analysis of the LSAT performance. In that section of the report, the analytical technique employed is misused, causing flaws in the presentation of the results. For example, in a number of places, findings are presented for students who have a grade point average of 1.0 (a D average). Because there are no such students in the sample, it is not legitimate to predict the behavior of this class of students. Moreover, because virtually no students with a D average would ever take the LSAT exam, it is inappropriate to discuss the findings interms of this group instead of in terms of students with more typical grade point averages.

Finally, this study utilized a nonexperimental design. Therefore all the limitations associated with this type of study apply to this report.

Bureau of Consumer Protection
May 1979

TM 004464

UNITED STATES GOVERNMENT

memorandum

DATE: September 11, 1978

REPLY TO ATTN OF: Arthur E. Levine, Attorney
Boston Regional Office

Program Code I16

SUBJECT: Unnamed Test Preparation Services, File 772 3000
Stanley H. Kaplan Educational Center, Ltd., File 762 3033
Educational Testing Service, File DB8 0013

TO: Federal Trade Commission

VIA: Bureau of Consumer Protection

I am transmitting herewith the staff memorandum of the Boston Regional Office on The Effects of Coaching on Standardized Admission Examinations. This memorandum encompasses the three above-captioned cases.

Buy U.S. Savings Bonds Regularly on the Payroll Savings Plan

OPTIONAL FORM NO. 10
(REV. 7-76)
GSA FPMR (41 CFR) 101-11.6
5010-112

ACKNOWLEDGEMENT

Dr. Conrad Strack, of C.A.C.I., who gave invaluable assistance in the preparation of some of the technical aspects of this memorandum deserves special acknowledgement, as do my colleagues in the Boston Regional Office, especially Francis X. McDonough.

TECHNICAL APPENDIX

S1. Uncoached 1-Time Takers of SAT
- S1-1. PSAT verbal and math score means
- S1-2. PSAT verbal vs math score table
- S1-3. SAT verbal and math score means
- S1-4. SAT verbal score histogram
- S1-5. SAT math score histogram
- S1-6. SAT scores for PSAT verbal in 30's
- S1-7. SAT scores for PSAT verbal in 40's
- S1-8. SAT scores for PSAT verbal in 50's
- S1-9. SAT scores for PSAT math in 30's
- S1-10. SAT Scores for PSAT math in 40's
- S1-11. SAT scores for PSAT math in 50's
- S1-12. SAT verbal vs PSAT verbal table
- S1-13. SAT math vs PSAT math table
- S1-14. SAT verbal = f(PSAT verbal) regression
- S1-15. SAT math = f(PSAT math) regression

S2. Coached 1-Time Takers of SAT
- S2-1. PSAT verbal and math score means for all, Stanley H. Kaplan Educational Center (001A) and Test Prep Centers (022)
- S2-2. PSAT verbal vs math score table
- S2-3. Enrollment counts for Stanley H. Kaplan Educational Center (001A), College Entrance Testing Service (010) and Test Prep Centers (022)
- S2-4. SAT verbal and math score means for all
- S2-5. SAT verbal and math score means for Stanley H. Kaplan Educational Center (001A) and Test Prep Centers (022)
- S2-6. SAT verbal score histogram for all
- S2-7. SAT math score histogram for all
- S2-8. SAT verbal and math histograms for Stanley H. Kaplan Educational Center (001A)
- S2-9. SAT verbal and math histograms for Test Prep Centers (022)
- S2-10. SAT scores for PSAT verbal in 30's
- S2-11. SAT scores for PSAT verbal in 40's
- S2-12. SAT scores for PSAT verbal in 50's
- S2-13. SAT scores for PSAT math in 30's
- S2-14. SAT scores for PSAT math in 40's
- S2-15. SAT scores for PSAT math in 50's
- S2-16. SAT verbal vs PSAT verbal table
- S2-17. SAT math vs PSAT math table

S2. Coached 1-Time Takers of SAT (cont'd)
S2-18. SAT verbal = f(PSAT verbal) regressions for all, Stanley H. Kaplan Educational Center (001A) and Test Prep Centers (022)
S2-19. SAT math = f(PSAT math) regressions for all, Stanley H. Kaplan Educational Center (001A) and Test Prep Centers (022)

S3. Uncoached 2-Time Takers of SAT
S3-1. PSAT verbal and math score means
S3-2. SAT first score, second score, and score gain means
S3-3. First SAT verbal score histogram
S3-4. First SAT math score histogram
S3-5. Second SAT verbal score histogram
S3-6. Second SAT math score histogram
S3-7. SAT score gain histograms
S3-8. PSAT verbal vs math table
S3-9. First SAT verbal vs PSAT verbal table
S3-10. First SAT math vs PSAT math table
S3-11. First SAT verbal = f(PSAT verbal) regression
S3-12. First SAT math = f(PSAT math) regression
S3-13. Second SAT verbal = f(first SAT verbal) regression
S3-14. Second SAT math = f(first SAT math) regression
S3-15. Second SAT verbal = f(PSAT verbal) regression
S3-16. Second SAT math = f(PSAT math) regression

S4. 2-Time Takers of SAT Coached Before First Attempt
S4-1. PSAT verbal and math score means
S4-2. SAT first score, second score, and score gain means
S4-3. First SAT verbal score histogram
S4-4. First SAT math score histogram
S4-5. Second SAT verbal score histogram
S4-6. Second SAT math score histogram
S4-7. SAT score gain histograms
S4-8. Enrollment counts for Stanley H. Kaplan Educational Center (001A), College Entrance Testing Service (010), and Test Prep Centers (022)
S4-9. PSAT verbal and math score means for Stanley H. Kaplan Educational Center (001A) and Test Prep Centers (022)
S4-10. SAT first score, second score, and score gain means

S4. 2-Time Takers of SAT Coached Before First Attempt (cont'd)
S4-11. SAT first score, second score, and score gain histograms for Stanley H. Kaplan Educational Center (001A) and Test Prep Centers (022)
S4-12. PSAT verbal vs math score table
S4-13. First SAT verbal vs PSAT verbal table
S4-14. First SAT math vs PSAT math table
S4-15. First SAT verbal = f(PSAT verbal) regressions for Stanley H. Kaplan Educational Center (001A) and Test Prep Centers (022)
S4-16. First SAT math = f(PSAT math) regressions for Stanley H. Kaplan Educational Center (001A) and Test Prep Centers (022)
S4-17. Second SAT verbal = f(first SAT verbal) for Stanley H. Kaplan Educational Center (001A) and Test Prep Centers (022)
S4-18. Second SAT math = f(PSAT math) for Stanley H. Kaplan Educational Center (001A) and Test Prep Centers (022)
S4-19. Second SAT verbal = f(PSAT verbal) for Stanley H. Kaplan Educational Center (001A) and Test Prep Centers (022)
S4-20. Second SAT math = f(PSAT math) for Stanley H. Kaplan Educational Center (001A) and Test Prep Centers (022)

S5. 2-Time Takers of SAT Coached Between Attempts
S5-1. PSAT verbal and math score means
S5-2. SAT first score, second score, and score gain means
S5-3. First SAT verbal score histogram
S5-4. First SAT math score histogram
S5-5. Second SAT verbal score histogram
S5-6. Second SAT math score histogram
S5-7. SAT score gain histograms
S5-8. Enrollment counts for Stanley H. Kaplan Educational Center (001A), College Entrance Testing Service (010) and Test Prep Centers (022)
S5-9. PSAT verbal and math score means for Stanley H. Kaplan Educational Center (001A) and Test Prep Centers (022)
S5-10. SAT first score, second score, and score gain means for Stanley H. Kaplan Educational Center (001A) and Test Prep Centers (022)

S5. 2-Time Takers of SAT Coached Between Attempts (cont'd)
S5-11. SAT first score, second score, and score gain histograms for Stanley H. Kaplan Educational Center (001A) and Test Prep Centers (022)
S5-12. PSAT verbal vs math score table
S5-13. First SAT verbal vs PSAT verbal table
S5-14. First SAT math vs PSAT math table
S5-15. First SAT verbal = f(PSAT verbal) regressions for Stanley H. Kaplan Educational Center (001A) and Test Prep Centers (022)
S5-16. First SAT math = f(PSAT math) regressions for Stanley H. Kaplan Educational Center (001A) and Test Prep Center (022)
S5-17. Second SAT verbal = f(first SAT verbal) regressions for Stanley H. Kaplan Educational Center (001A) and Test Prep Centers (022)
S5-18. Second SAT math = f(first SAT math) regressions for Stanley H. Kaplan Educational Center (001A) and Test Prep Centers (022)
S5-19. Second SAT verbal = f(PSAT verbal) regressions for Stanley H. Kaplan Educational Center (001A) and Test Prep Centers (022)
S5-20. Second SAT math = f(PSAT math) regressions for Stanley H. Kaplan Educational Center (001A) and Test Prep Centers (022)

SW. SAT Window Analysis
SW-1. Coached 2-time takers of SAT
SW-2. Coached 3-time takers of SAT
SW-3. Uncoached 2-time and 3-time takers of SAT

SDQ. SAT SDQ and ZIP Profiles
SDQ-1. Uncoached 1-time takers of SAT
SDQ-2. Coached 1-time takers of SAT
SDQ-3. Uncoached 2-time takers of SAT
SDQ-4. 2-time takers of SAT coached before first attempt
SDQ-5. 2-time takers of SAT coached between attempts

LW. LSAT Window Analysis
- LW-1. Interval from coaching to exam for 1-time takers
- LW-2. Coached and uncoached 2-time takers
- LW-3. Coached and uncoached 3-time takers
- LW-4. Coached and uncoached 4-time takers

M. Testing and Coaching Histories of Multiple-Time Takers of LSAT

LH. LSAT Histograms
- LH-1. Uncoached 1-time takers
- LH-2. Coached 1-time takers
- LH-3. Uncoached 2-time takers
- LH-4. 2-time takers coached before first attempt
- LH-5. 2-time takers coached between attempts

L1. 1-Time Takers of LSAT
- L1-1. Uncoached 1-time takers of LSAT
- L1-2. All coached 1-time takers of LSAT
- L1-3. Stanley H. Kaplan Educational Centers (Puerto Rican) (001AP)
- L1-4. Stanley H. Kaplan Educational Centers (001)
- L1-5. Amity Review Course (002)
- L1-6. John Sexton's LSAT Preparation Center (003)
- L1-7. Law School Admission Test Review Course (Evergreen) (004)
- L1-8. Remaining schools
- L1-9. Regression for uncoached whites
- L1-10. Regression for uncoached non-whites
- L1-11. Regressions for coached whites and coached non-whites
- L1-12. Regressions by coaching school for coached whites

L2. 2-Time Takers of LSAT Coached Before First Exam
- L2-1. Uncoached 2-time takers of LSAT
- L2-2. All 2-time takers of LSAT coached before first exam
- L2-3. Stanley H. Kaplan Educational Centers (Puerto Rican) (001AP)
- L2-4. Stanley H. Kaplan Educational Centers (001)
- L2-5. Amity Review Course (002)
- L2-6. John Sexton's LSAT Preparation Center (003)
- L2-7. Law School Admission Test Review Course (Evergreen) (004)
- L2-8. Remaining schools

L2. 2-Time Takers of LSAT Coached Before First Exam (cont'd)
- L2-9. Regressions for uncoached whites
- L2-10. Regressions for uncoached non-whites
- L2-11. Regressions for coached whites and non-whites
- L2-12. Regressions by coaching school for coached whites

L3. 2-Time Takers of LSAT Coached Between Exams
- L3-1. All 2-time takers of LSAT coached between exams
- L3-2. Stanley H. Kaplan Educational Centers (Puerto Rican) (001AP)
- L3-3. Stanley H. Kaplan Educational Centers (001)
- L3-4. Amity Review Course (002)
- L3-5. John Sexton's LSAT Preparation Center (003)
- L3-6. Law School Admission Test Review Course (Evergreen) (004)
- L3-7. Remaining schools
- L3-8. Regressions for coached whites and coached non-whites
- L3-9. Regressions by coaching school for coached whites

I. SUMMARY

It is the established policy of the United States to provide equal educational opportunities for all citizens.

> Rcognizing that the Nation's economic, political, and social security require a well-educated citizenry, the Congress (1) reaffirms, as a matter of high priority, the Nation's goal of equal educational opportunity, and (2) declares it to be the policy of the United States of America that every citizen is entitled to an education to meet his or her full potential without financial barriers.1/

The present investigation discloses that standardized examinations which are utilized as important decision making elements in the admission process to undergraduate and graduate colleges and universities are susceptible to the short-term preparation (often called coaching) offered by numerous commercial entities throughout the United States.

Analysis reveals that there is a statistically significant difference between the score increases obtained by coached and uncoached individuals. (However, the score increases are variable both between and within examinations.) Even more importantly, score increases resulting from coaching have a practical, educationally meaningful, effect in that coaching can be the determining factor in deciding who is admitted to undergraduate and graduate colleges and universities. The availability of coaching is positively correlated

---

1/ General Education Provisions Act, 20 U.S.C.A §1221-1 (1978).

to the ability to pay the tuition at coaching schools, which can be as high as $250. Therefore coachable standardized admission examinations create financial barriers to educational opportunities in direct conflict with our Congressionally declared national education policy.

The commercial test preparation schools do not perform uniformly. Some are quite beneficial while others appear to provide marginal benefits. Moreover, the coaching schools have a universal propensity for engaging in making unsubstantiated advertising claims, in some instances making false and deceptive advertising claims, and engaging in other unfair and deceptive marketing practices, all in violation of Section 5 of the Federal Trade Commission Act.

Nonetheless the existence of only one coaching school (and there is more than one) that can materially increase individuals' scores on standardized admission examinations such as the Scholastic Aptitude Test and the Law School Admission Test reveals the lack of reliability and validity of these examinations. The test makers themselves tell us that standardized admission examinations should be used to help predict the academic performance of an individual in undergraduate or graduate school. Yet, since short-term preparation can increase scores, but has a questionable long-term effect, the true predictive value of the standardized examinations is suspect.

The standardized admission examinations are discriminatory in a number of ways. They discriminate against any individual who either: (1) can not afford the cost of commercial preparation or (2) elects not to attend a commercial preparation course even if he can afford it because of acceptance of the dogma promulgated by the test makers, test administrators, and test users over the past twenty years that coaching is valueless.

The examinations appear to discriminate on the basis of race. Certain sub-populations may receive a lesser benefit from coaching than others. (However as grade point average approaches the maximum there is an apparent inverse effect as minorities show slightly greater score increases due to coaching.) This result may be attributed to the failure of coaching schools to develop materials and techniques aimed at these groups or it may be a manifestation of an inherent bias in the examinations themselves. Whatever the cause, the effect is to put minorities with low grade point averages at a greater disadvantage in the quest for positions in our schools of higher education by widening the already existing score abyss.

The economic and social benefits flowing from admission to undergraduate and graduate colleges and universities

(especially the more prestigious) are axiomatic. The susceptibility of standardized examinations to coaching, the unavailability of coaching to all on an equal basis, the discriminatory effects befalling some groups who benefit less from coaching than others, and the failure to rectify this situation, constitute violations of Section 5 of the Federal Trade Commission Act or are indicia of serious flaws in both the post secondary school admission process and in our national education system.

Accordingly, we propose for Commission consideration some or all of the following remedial actions to alleviate or eliminate the unfair and deceptive acts or practices we have discovered:

(a) Publication of either a staff report or formal Section 6(f) report to Congress;

(b) Initiation of formal investigations of the Educational Testing Service, College Entrance Examination Board, Law School Admission Council, and American Bar Association (These investigations would seek to ascertain the extent of our jurisdiction over the investigated parties and we would simultaneously seek to negotiate consent agreements. Complaint recommendations, if appropriate and necessary, would follow these investigations);

(c) Additional studies to supplement the statistical analysis we have completed and which ultimately would

lead to an attempt to create uncoachable, more valid and reliable standardized admission examinations;

(d) Initiation of a trade regulation rule proceeding regarding the coaching school industry or alternatively individual litigation against the coaching school with the most egregious violations of Section 5.

These and other alternatives are explained in greater detail in the recommendations section, infra.

II. INTRODUCTION

On October 13, 1976, the Federal Trade Commission issued a resolution authorizing and directing its Boston Regional Office (BRO) to conduct an investigation:

> To determine whether or not various examination and test preparers, review courses, coaching schools and other persons, partnerships, or corporations, may have been, or may now be engaged in unfair or deceptive acts and practices in or affecting commerce in violation of Section 5 of the Federal Trade Commission Act, as amended, including but not limited to false, misleading and deceptive advertising, non-disclosure of material facts, unfair and deceptive point of sale misrepresentations, and other unfair or deceptive acts and practices in connection with the advertising, offering for sale, sale and distribution of the services and products of various test preparers, review courses, and coaching schools. The investigation is also intended to determine whether Commission action to obtain consumer redress would be in the public interest.2/

2/ See Category I File 772 3000, Vol. I, p. 1.

An FTC news release 3/ dated November 2, 1976 publicly announcing the investigation indicated that the investigation would be designed to provide insight into such issues as:

- whether test preparation centers have had or now have a reasonable basis for claims of score increases at the time such claims were or are made;
- whether test preparation centers have the capacity to increase or maximize scores on certain standardized tests that are often prerequisites to admission to undergraduate or graduate colleges, universities, professional schools or professions;
- whether test preparation centers have the capacity to increase scores on certain standardized tests to the degree advertised;
- whether test preparation centers are engaged in unfair or deceptive point-of-sale practices; and
- whether Commission action to obtain consumer redress would be in the public interest.

Prior to commencing the nationwide investigation announced in the November 2, 1976 press release, staff had been investigating the Stanley H. Kaplan Educational Center, Ltd. (File No. 762-3033).4/ After much cerebration and consultation with experts in the field 5/ staff concluded that a national in-

---

3/ See Category III File 772 3000, Vol. I, p.88.

4/ The investigation of the Kaplan organization formally commenced on August 18, 1975. Its original premise was that Kaplan could not substantiate certain advertising claims at the time they were made and accordingly had violated Pfizer, 81 FTC 23 (1972).

5/ See Category III File 762 3033, Vol. I, p.83-84, 100-101; Category I File 772 3000, Vol. I, p.47-48; Category I File 772 3000, Vol. II, p.1-2, 14-16, 34-39.

vestigation of the test preparation industry would be far more cost efficient and better serve the public interest than an investigation of only one coaching school.6/ The investigation of Stanley H. Kaplan Educational Center, Ltd., although retaining its own 7-digit number has therefore been incorporated into the industrywide inquiry.

III. A HISTORY OF THE SCHOLASTIC APTITUDE TEST (SAT), THE LAW SCHOOL ADMISSION TEST (LSAT), THEIR USES BY COLLEGES, LAW SCHOOLS, AND OTHERS

The SAT, LSAT and other standardized admission examinations are intermediate predictors. They do not purport to measure how an individual will perform in a given profession or field. Instead it is suggested by the administrators of these examinations that they be used as one criterion in predicting how well an individual will perform in the first year of academic study.7/

The need for a universal predictor of first year academic performance is indicated by:

(1) the variance in meaning of grades from different schools and curricula;

(2) the inability of admissions offices to cope with large numbers of applications on a personal basis;

6/ See Category I File 772 3000, Vol. I, p.9-10.

7/ Guide To The Admissions Testing Program, p.21, CEEB, NY (1977).

(3) the inability of graduate schools (and some undergraduate schools) to expand their enrollments to meet demand; and

(4) the desire to minimize the attrition rate;

(a) because of the psychological and economic hardships on students who fail; and

(b) because of the economic disutility of a high attrition rate to academic institutions.

On November 17, 1900 the College Entrance Examination Board (CEEB) officially commenced operations. Seven months later 973 students wrote essay examinations on subjects including history, english, mathematics, science, and foreign languages. The grades received on those examinations were sent to participating colleges to be used as part of the admission procedures. By June of 1925 College Board examinations were being taken by approximately 20,000 candidates.

In June of 1926, 8,040 candidates for admission to college received the first administration of the Scholastic Aptitude Test (SAT). The SAT had been developed for CEEB by Carl B. Brigham, a professor of psychology at Princeton. Its initial purpose was to supplement the regular series of CEEB examinations.

As the number of applicants for admission to colleges rapidly rose (excepting a regression during the depression), the numbers alone made the essay format of the College Boards

impractical. In 1946 some 46,000 applicants took the College Boards. Although traditionalists grumbled, the multiple-choice format of the SAT was a natural substitute.

In 1947 CEEB, in cooperation with the American Council of Education (the Graduate Record Exam) and the Carnegie Foundation for the Advancement of Teaching (which administered the National Teachers Exam), founded the Educational Testing Service (ETS).

ETS' initial client was CEEB, and as a result it administered and continues to administer the SAT and college achievement tests. Since its inception ETS has diversified and now administers, researches, and refines numerous standardized admission and vocational examinations including the LSAT, GRE, GMAT as well as the SAT and achievement tests.

Today approximately 1.5 million students per year take the SAT. The SAT coupled with ETS' other testing activities accounted for about 87% of ETS' $70 million revenue in fiscal 1977.

The specific use to which the SAT has been put in the past decade has varied from college to college and from year to year. In general the SAT was most important in the admission process during the post-Sputnik era when competition for college admission became intense. Most colleges

responded by raising their standards rather than increasing enrollment, and test scores therefore became critical.8/

With decreasing applications and enrollment expansion the SAT today is generally less critical in the admission process than it was in the 1960's. However it is still crucial for those seeking admission to "high prestige" schools. It appears that for schools other than the highly selective the SAT is most important at the bottom line. That is, failure to obtain a certain minimum score will result in rejection. For example the California State University and Colleges System requires a minimum combined score of 2500 on the SAT plus three achievement tests and a B average. If a student fails to attain a 3.1 high school average (B-) the University of California/Berkeley requires a minimum combined SAT score of 1100 plus a minimum score of 1650 on three achievement tests. Oregon State University requires a minimum combined SAT score of 890 or a high school average of 2.50. Florida State University requires out of state students to obtain a minimum score of 500 on both the verbal and mathematical sections of the SAT while Florida Technological University requires out of state students to have a combined minimum SAT score of 900. The University of South Florida requires out of state appli-

---

8/ See generally, 2 The Encyclopedia of Education, p.211 -213, The Macmillan Co. and The Free Press 1971; Ravitch, The College Boards, The N.Y. Times Magazine, May 4, 1975, p.12-22; Science Digest, October 1976, p.39-45; Forbes, November 15, 1976, p.94.

cants to obtain a combined SAT score of 800 with a minimum of 400 on the SAT verbal. North Texas State University requires a minimum combined SAT score of 675 and the University of Mississippi requires a combined minimum SAT score of 680.

Princeton University, Smith College, Stanford University, Wellesley College, Brown University, University of Chicago, Yale University, and Massachusetts Institute of Technology, among others, all accept freshman classes in which over 90% of the admittees score over 500 on both the SAT verbal and SAT mathematical sections.9/

As is evidenced by the figures above some universities prescribe definitive minimum cutoffs and at others the failure to obtain a certain minimum score means almost certain rejection.

In some instances where high schools refuse to send grades to colleges or where a high school is relatively unknown to a college admissions office the SAT becomes the sole criterion for admission. Furthermore New York State has substituted the SAT for its traditional Regent's Exam to determine scholarship recipients.10/

9/ The sources for SAT score data are Comparative Guide to American Colleges, Cass & Birnbaum, Harper Row, New York, 8th Ed., 1977; and The College Handbook, CEEB, N.Y. 1977.

10/ See Category III File 772 3000, Vol. I, p.87. This is an interview report with the Chief of New York State's educational testing wherein he states that if coaching is only minimally effective it would distort to some extent who obtained Regent's scholarships.

Generally while the SAT is not as important a factor in the admission process as it was several years ago it is still a very material factor. A reversion to a national attitude similar to that of the early 1960's would make the SAT even more critical in the admission process.

It appears that the first law aptitude examination was offered at Columbia Law School in 1921.11/ Prior to 1948 at least seven specially constructed legal aptitude tests were used by various institutions as one means of selecting applicants to their law schools.12/ In 1925 Merton L. Ferson, Dean of the University of North Carolina Law School, and George Stoddard, Assistant Professor of Psychology and Education at the University of Iowa, announced the creation of the Ferson-Stoddard Law Aptitude Examination.13/ The Ferson-Stoddard examination was remarkably similar to the current day LSAT containing sections on: (1) capacity for accurate recall (memory); (2) reading comprehension; (3) reasoning by analogy; (4) reasoning by analysis; and (5) skill in pure logic.14/

11/ Ramsey, Law School Admissions: Science, Art, or Hunch, 12 J. Legal Ed. 503 (1960).

12/ Id.

13/ Ferson, Law Aptitude Examinations, 5 Am. L. School Rev. 563 (1925).

14/ Stoddard, Ferson and Stoddard Law Aptitude Examination -Preliminary Report, 6 Am. L. School Rev. 78 (1927).

In 1941 an experimental edition of the Iowa Legal Aptitude Test appeared. Apparently dissatisfied with the examinations available, a group of law schools approached the College Entrance Examination Board in 1947 regarding the possibility of producing a national aptitude test for the legal profession. The result of these negotiations was the birth of the LSAT.15/

The LSAT has grown in importance to the point where as a prerequisite to accreditation the American Bar Association (ABA) requires law schools to require their applicants to take the LSAT.16/ It is not only the demand of the accrediting authorities that makes the LSAT prominent in the admission process. Although intensive examination of an applicant's educational and life record might well yield more satisfactory admission results 17/ most law schools were and are thinly

---

15/ See n. 11 at 513, supra.

16/ "All applicants except those physically incapable of taking it, should be required to take an acceptable test for the purpose of determining apparent aptitude for law study. A law school that is not using the Law School Admission Test administered by the Educational Testing Service should establish that it is using an acceptable test." ABA Standards for Legal Education, Chapter V, Section 503. The American Association of Law Schools (AALS) has a similar requirement. In fact there is no other test that purports to measure aptitude for the study of law. Goolsby, A Study of the Criteria for Legal Education and Admission to the Bar, 20 J. Legal Ed. 175 (1967).

17/ Rosen, Equalizing Access to Legal Education: Special Programs for Law Students Who Are Not Admissible By Traditional Criteria, U. of Toledo L. Rev. 321 (1970).

staffed with admissions personnel.18/ As a result, law school admission decisions, excluding special admission programs, are based almost exclusively on the numbers. Even a vigorous opponent of this conclusion notes:

> At some point of course it does become essentially impossible for personal factors to compensate for uncompromising objective credentials for the over-all correlation of LSAT scores and undergraduate grades with law school performance can raise questions of survival.19/

While there is a great diversity in approach the most common method used in selecting applicants for admission to law school creates an index score by adding the LSAT score to a number equal to 200 times the grade point average (Index = LSAT + [GPA X 200]).20/ This procedure attempts to give the LSAT and the GPA approximately equal weight in the admission decision making process.

18/ Schmidt, Admission to Law Schools: Not By Computer, Not By Chance, 10 Tulsa L.J. 111 (1974).

19/ Winograd, Law School Admissions, A Different View, 59 A.B.A. J. 862, 865 (1973).

20/ See Category III File 772 3000, Vol. XXXI, p.183. Although this information is obtained from a coaching school it is highly credible in that the Board of Editors consists of professors from Harvard, Loyola, Wayne State, University of Illinois, University of Texas, and University of Southern California Law Schools. See also Category III File 772 3000, Vol. I, p. 84-86, Admissions Practices of Temple Law School; and Pre Law Guidebook of Boston College, p. 65, wherein it is stated:

> Almost every law school will weigh certain variables within the structure of a specific formula. Many law schools multiply their LSAT score times two adding this result to your Grade Point Average (GPA) and the rating of your undergraduate institution.

The importance of the LSAT score in the admission process can not be underemphasized. Not only does the LSAT share approximately equal weight with the Grade Point Average (GPA) but the failure to obtain a minimumn LSAT cutoff score at some law schools means automatic rejection.21/ While only a few law schools admit to having absolute minimum LSAT requirements others admit to having a "preferred" minimum LSAT score.22/ While the official guide to law schools informs us that "Some schools do follow automatic qualifying or disqualifying credentials such as minimum gradepoint averages (GPA) and LSAT scores, but most are not wedded to such cutoff scores and averages," 23/ a review of that publication indicates that the use of a minimum cutoff score is not infrequent.

For example the following law schools among others did not admit any students with LSAT scores below 500 for the 1977 graduating class (the number in parentheses is the number of applicants applying with an LSAT score below 500): University of Denver (196), George Washington University (384), University of Illinois (199), University of Kentucky (199), Mercer University (227), University of Minnesota (82), University of New Mexico (187), University of Wisconsin (107). In summary, of

---

21/ Lunneborg & Radford, The LSAT: A Survey of Actual Practice, 18 J. Legal Ed. 1313 (1966).

22/ Id.

23/ Prelaw Handbook; AALS, LSAC, ETS (1974).

the 1581 applications received by these law schools reporting an LSAT score below 500, none were accepted.

The following law schools also did not accept any applicants with an LSAT score below 500 except for those students admitted pursuant to a special admission or minority program (the number in parentheses again reflects the number of applicants to the institution with LSAT scores below 500): University of California/Berkeley (151), University of Colorado (240), University of Georgia (272), Marquette University (264), University of North Carolina (279), and the University of Oregon (96). In summary, of the 1308 applicants reporting an LSAT score of below 500, not including those admitted pursuant to a special admission program, none were admitted to the above-mentioned law schools.24/

The above survey is not exhaustive. Not all law schools have furnished data and we could see no benefit at this time in attempting to acquire admission standards from every law school in the country. We believe it is clear that minimum cutoff scores are prevalant.

Even if it is conceded that law schools are not using a minimum cutoff score, it is evident that the use of a formula in effect creates a threshold LSAT score that must be surpassed to obtain consideration for acceptance. This becomes

---

24/ Id.

even more evident when it is recognized that the range of the grade point averages of applicants is narrow (as a result of both grade inflation and increased applicant ability) thus limiting the grade point average component of the formula to a range of about 400 points rather than its theoretical 800 points.

The LSAT is being used (abused) for purposes other than admission to law school. We have had personal experiences of employers requesting LSAT scores on applications for attorney positions. In fact until recently the Commission requested a job applicant's LSAT score on the supplemental attorney's form. We believe this is a practice that is not uncommon in both the public and private sectors.

IV. REVIEW OF PRIOR RELATED RESEARCH AND LITERATURE

Considering the imporance of the issue, and the constant student and parent request for its resolution, there is a paucity of prior research and literature concerning the coachability of standardized admission examinations.25/ In fact we find virtually no material dealing with the effects of coaching on any standardized admission examination other than the Scholastic Aptitude Test (SAT) and no material at all concerned

---

25/ For the most thorough and most up to date review of this entire area, see Pike, Short-Term Instruction, Testwiseness and the Scholastic Aptitude Test: A Literature Review with Research Recommendations, Educational Testing Service, Princeton, New Jersey, 1978.

with the commercial coaching schools as they presently exist. We also find no material on the effects of coaching 1-time test takers, only test repeaters who have been coached in the interim period between test administrations. There is however considerable material dealing with the general topic of test-wiseness. (TW).

Two research reports deal extensively with the current state of knowledge of test-wiseness.26/ Test-wiseness has been defined as the ability to manifest test taking skills which utilize the characteristics and formats of a test and/or test taking situation in order to receive a score commensurate with the abilities being measured. Alternatively the term has been defined as a subject's capacity to utilize the characteristics and formats of the test and/or the test taking situation to receive a high score...and is logically independent of the examinee's knowledge of the subject matter for which the items are supposedly measures.

Some aspects of test-wiseness include effects of practice on tests, familiarization with item types, following instructions, using time efficiently, knowing when to guess, not

---

26/ See generally, Fond V., Everything You Wanted To Know About Test-Wiseness, 1973 (Eric Document Reporduction Service #Ed 093 912); Jongsma, E.A., Wershaver E., The Effects of Instruction in Test-Making Skill Upon Student Performance on Standardized Achievement Tests, 1975 (Eric Document Reporduction Service #Ed 114 408).

hesitating to change an answer, and having a planned strategy for answering examination questions.

Test-wiseness is recognized by most experts as a source of variance on educational tests. Moreover it is generally agreed that test-wiseness is cognitive. It would then not be surprising to find that coaching schools have the capacity to increase scores on stnadardized admission examinations, at least to the extent that test-wiseness is a score component, especially where they are dealing with test-naive students.

Generally the few prior studies investigating the effects of coaching on the Scholastic Aptitude Test have concluded that coaching is ineffective. Based on these studies the trustees of the College Entrance Examination Board have stated that "score gains directly attributable to coaching are of such a small magnitude that it is unreasonable to expect coaching to affect admissions decisions".27/

However, a 1972 study conducted by two Educational Testing Service psychometricians, which was commissioned by the College Entrance Examination Board, severely criticizes these prior studies.28/

27/ College Entrance Examination Board, Effects of Coaching on Scholastic Aptitude Test Scores, New York, CEEB, 1965.

28/ Pike L. & Evans F., Effects of Special Instruction for Three Kinds of Mathematics Aptitude Items, CEEB, New York, 1972.

The authors state:

> ... the particular question of the effects of special instruction on different mathematics item formats is not adequately answered by previous research. First, the majority of studies were designed to determine whether coaching schools gave their clients an unfair advantage on the SAT. The instruction provided in these studies was, where its nature can be ascertained, rather scanty. There appeared to be little or no systematic attempt to identify the skills needed to perform well on the test and to develop materials to meet these needs. Since most previous research on this question involves subjects at the extremes of the ability range, generalization to the more heterogeneous population of candidates currently seeking admission to higher education becomes hazardous.29/

The authors also stated that:

> ... many of these studies were conducted in the 1950's when the SAT candidate population was more homogeneous than it is today. Consequently, much of this research involved subjects enrolled in private prepatory schools or in public schools whose student bodies were well above the national average in tested ability. One can probably assume that the subjects in these studies ... were therefore less likely to benefit from special instruction than were students in the more general population.30/

It is also important to note that students were assigned to experimental and control groups in some instances without regard to their desires to receive coaching, although in other instances the assignment was on a voluntary basis.

The major focus on the 1972 study was to determine if a new mathematical question format (quantitative comparisons), which the College Board was considering using on the SAT mathematical section, was susceptible to coaching. As a by-product

---

29/ Id.

30/ Id.

the authors also sought to ascertain if the SAT question types then in use, regular math and data sufficiency, were susceptible to coaching. The authors concluded that "... each of the three item formats was susceptible to the special instruction directed toward it."31/ They further stated that, "Certainly the gains achieved by the quantitative comparison and data sufficiency instructed groups on the appropriate items are of practical value."32/

As a result of these findings the College Board declined to use quantitative comparison items on the SAT at that time.33/ Nevertheless these item types are found on the Scholastic Aptitude Test, Law School Admission Test, Graduate Management Admission Test, and Graduate Record Examination today. Moreover the Scholastic Aptitude Test still retains data sufficiency and regular math item formats.34/

In a most recent paper Pike 35/ recognized ten components of observed SAT test scores:

31/ Id.

32/ Id.

33/ Id.

34/ See generally the bulletins prepared for applicants for standardized examinations by the administrators of the examinations. File 772 3000, Physical Exhibits I, J, K, and L.

35/ See n. 25, supra.

A. "True score" components: e.g., verbal aptitude, math aptitude.

1. A composite of underlying knowledge (e.g., vocabulary, elementary algebra) and reasoning ability, developed over a long period of time. (Long-term acquisition, long-term retention.)

2. A state of being well-reviewed, so that the performance to be demonstrated is in line with the individual's underlying developed competence. (Short-term acquisition, short or medium-term retention.)

3. Integrative learning, overlearning, consolidation. (Short-term acquisition, long-term retention.)

4. Learning criterion relevant, analytic skills (e.g., how to identify the main idea of a paragraph; how to simplify complex quantitative terms before comparing their value). (Short-term acquisition, long-term retention.)

B. Primary test specific components.

1. The match between the domain of developed ability (including the various score components listed in A above) and test content. Mismatches may occur as gaps in such areas as skill in locating information in reading passages and ability to work with the algebra of inequalities.

2. General TW--Test familiarity, pacing, understanding of general directions, general strategies for using partial information, and so on.

3. Specific TW--Components similar to B2, but in reference to characteristics of specific item formats (such as verbal analogies and quantitative-comparison items) and other item characteristics.

C. Secondary components influencing test taking.

1. Level of confidence.

2. Level of efficiency--The ability to use available knowledge and reasoning ability quickly, with a relatively low rate of errors resulting from working rapidly.

D. "Error." Fluctuations in attention, sampling error, variations in luck in guessing, etc.36/

Pike concluded that eight of these items (except A1, a composite of underlying knowledge, and D, error) were, based on his review of prior research, susceptible in varying degree and situations to some type of preparation (either coaching, short-term instruction, or intermediate term instruction).37/

This is evidence that test preparation services may have the capacity to increase scores. Pike stated in considering the discrepancy between past studies on coaching that "... in principle a single study showing substantial positive gains cannot be countered or refuted by any number of studies failing to get positive results."38/

V. INVESTIGATIVE METHODOLOGY

Test preparation services are those commercial 39/ enterprises that in a relatively short time, by employing a variety of methods, attempt to aid an individual to increase his/her scores on standardized examinations that are often prerequisites for admission to undergraduate and graduate colleges

---

36/ Id. at 3-4.

37/ Id. at 38-42.

38/ Id. at 35.

39/ See our comments on the non-profit segment, infra.

and universities.40/ Their intensive programs are directed specifically towards the examination that an individual is preparing to take and any residual long-lasting benefits that may result are purely secondary. The terms "review course", "coaching school" and "cram course" are synonymous with and used interchangeably with the term "test preparation service". Our initial investigatory tasks were to identify these organizations and ascertain the nature and structure of the test preparation industry.

Surveys of the Education and Career Development Directory of the New York Times 41/ and the education sections of other national Sunday newspapers proved fruitful in identifying industry members. Once an industry member was identified it was invariably asked to identify its competitors. We also closely scrutinized the telephone directory listings under tutoring and coaching, and visited numerous campuses to view any advertisements appearing in college newspapers or posters placed on bulletin boards by coaching schools. Needless to say we asked students if they had any knowledge of who was offering coaching courses.

40/ This definition is similar to that chosen by the College Entrance Examination Board (CEEB) to define coaching. See, Effects of Coaching on Scholastic Aptitude Test Scores, CEEB, N.Y. (1965) p.4.

41/ See Category III File 772 3000, Physical Exhibit A, p.50-51.

Perhaps our most successful technique for identifying industry members was to mail four hundred thirty-two (432) questionnaires 42/ to pre-law advisors in universities in the metropolitan areas of Boston, MA; Chicago, IL; Los Angeles, CA; and New York, NY.43/ We received 185 responses to these questionnaires (42.8%) and 69 responses named either an individual, commercial enterprise, or not-for-profit organization that was offering or had offered test preparation.

Our previously acquired knowledge of the industry alerted us at the outset to the impossibility of identifying every industry member in the United States. Accordingly we decided to focus on major metropolitan areas that have a large number of universities, a high student population, and a high number of coaching schools.

Stanley H. Kaplan Educational Centers, Ltd., the largest coaching school in the industry in terms of annual revenues as well as total number of students taught, informed us that its

---

42/ These questionnaires were mailed after receiving clearance from the General Accounting Office as required by the Federal Reports Act, 44 U.S.C. §§3501 - 3511. See Category I File 772 3000, Vol. I, p. 49-59.

43/ The pre-law advisors were selected by reviewing Directories of Colleges from California, Illinois, Massachusetts, and New York. These directories are incorporated in File 772 3000 as Physical Exhibits M, N, O, and P respectively. The responses to these questionnaires are incorporated in Category III File 772 3000, Vols. IV - VI.

largest centers were located in the metropolitan areas of Boston, Chicago, Los Angeles, and New York. We also determined that all the national coaching schools operated in at least one of these cities. We therefore decided to limit our initial inquiries to these four metropolitan locations. We have since decided that close scrutiny of other geographical locations is unnecessary at this time. The statistical analysis that we have performed and its conclusions can be validly used to draw parallel inferences concerning the entire nation.44/

We also decided to limit our investigation in time to the period from October 1974 through December 1976 inclusive. This decision was based on several factors. The number of students coached in this period gave us large sample sizes which is beneficial to the accuracy of a statistical inquiry. The record retention of the coaching schools deteriorates rapidly prior to that period and identification of now defunct entities that existed prior to October 1974 is extremely difficult. Data maintenance for a greater time period and more

---

44/ In fact, this is what the mathematical discipline of statistics is all about. Statistics is the science of inferring generalities from specific observations. Although we never know for sure in any particular case whether a hypothesis is true or false the procedures of statistical inference make it possible for us to state precisely what the probabilities are that we will accept a false hypothesis or reject a true hypothesis. This statistical proof is the basic form of proof used in the investigations of all sciences.

extensive geographical locations becomes extremely cumbersome and costly as time frame or geographical location is increased.

Not only have we limited our specific inquiry to time and location but we have also limited it, for the purpose of testing the effectiveness of coaching and the truth or falsity of coaching school claims, to two standardized examinations: the Scholastic Aptitude Test (SAT) and the Law School Admission Test (LSAT). The justification for the limitation of the specific inquiry to these two examinations is the same as that for limiting the specific inquiry to four geographical locations -- viz. we believe valid inferences about the coachability of other examinations can be drawn from the specific results we obtain for the SAT and LSAT, or at the very least place a strong burden on the parties to whom any inferences are adverse. Furthermore, the SAT and LSAT are the two most heavily coached examinations administered by the Educational Testing Service and therefore we have had less difficulty in developing a significant data base for their analysis than we would have for other examinations.

One further limitation on our specific inquiry must be noted. It came to our attention that there are many high school teachers and others coaching high school students for the SAT. For practical reasons (time and resources) it is not possible to ferret out all these individual entrepreneurs and we have not attempted to do so. This fact coupled with the

extremely extensive and voluminous SAT computer files maintained by the Educational Testing Service caused us to decide to limit the specific SAT inquiry to major coaching schools in the metropolitan New York City area. The failure of some of these organizations to maintain any records, legible records, or to have taught an appreciable number of students during our relevant time frame has reduced our SAT statistical analysis to two major SAT coaching schools. This limitation in scope of our statistical analysis has not affected in any way our industry analysis. Furthermore this limitation of our statistical analysis, if it is a bias, disfavors the coaching schools actually analyzed, in that we can not be sure that our control groups have been culled of all coached students. This and other biases are discussed, infra.

The statistical analysis to which we have been referring was designed to determine the effectiveness of coaching schools. As a by-product it also determines the truth or falsity of the coaching school claims as well as the truth or falsity of the claims of the test makers. It is discussed in more detail, infra.

In order to develop data for computer analysis, enrollment forms reflecting coaching school enrollees had to be matched with the ETS computer tapes. As individual industry members were identified they were requested to submit information to us pertaining to their operations. The most important

element requested was the student enrollment or registration forms. Although most test preparation services had this data in some form their record retention and record legibility was not always exemplary. Therefore each of the more than 14,000 enrollment forms we obtained was inspected for legibility and for any apparent inconsistencies or omissions. If for example a name was partially illegible we checked the appropriate telephone book in an attempt to ascertain the correct name spelling. If a street address was omitted we followed the same procedure. In literally thousands of instances zip codes were omitted from addresses on the enrollment forms and these were manually supplied by employing the National Zip Code Directory. This procedure resulted in our matching over 80% of the coaching school enrollees with individuals on ETS' computer tapes. Part of the unmatched percentage can be attributed to a failure by the student to actually take the SAT or LSAT.

In order to ascertain the completeness of the coaching schools' enrollee records we determined the expected number of enrollees by dividing each coaching school's annual income by its tuition cost. Although this procedure was unavailable in some instances due to integrated financial statements, and was approximated in other instances due to tuition fluctuation, we conclude that we have acquired over 91% of the total LSAT enrollment forms we sought from the coaching schools involved in

our statistical analysis and in excess of 99% of the SAT enrollment forms we sought from the coaching schools involved in our statistical analysis.

Once the enrollment forms had been acquired and any illegibilities or omissions were rectified, the names, addresses, and other available identifying information, including the dates when the student was coached, contained on the enrollment forms were typed onto plain bond paper (only students attending the same coaching school appeared on the same page with a code corresponding to the coaching school where the students had been coached appearing on each page).45/ These student enrollment lists were then ready for computer matching with the ETS computer tapes and for statistical analysis.

VI. INDUSTRY STRUCTURE

It is fundamental to recognize that the economics of the coaching school industry is merely a subsidiary consideration in ascertaining the public interest of this inquiry. The social, psychological and economic benefits that may be gained by individuals who attend a coaching school transcend the current stature of the coaching school industry. Notwithstanding, the following industry analysis is offered.

45/ This procedure was followed to ensure that only FTC personnel could determine which results corresponded to which coaching schools until such time as the data is publicly released.

A. COMMERICAL

In the metropolitan areas of Boston, Chicago, New York, and Los Angeles from October 1974 through December 1976 a total of in excess of 15,000 students were commercially coached for the SAT and LSAT.46/ We estimate that 50,000 individuals are being coached annually nationwide for all standardized admission examinations.

For 1975 and 1976 combined, the twenty-one commercial entities that we have identified and included in our analysis had total annual sales of $9,403,615.47/ We estimate that the total annual sales volume of all commercial preparatory courses nationwide is $10,000,000.

The twenty-one entities considered here expended $400,000 48/ on advertising in 1976. Their tuition ranged in price from a maximum of $250 (plus a $50 refundable deposit for materials)

46/ We have in our possession the names of 11,906 LSAT coachees and 2286 SAT coachees that were obtained for use in this study although not all have been used. All SAT coachees are from the metropolitan New York City area.

47/ This figure includes revenues obtained from all standardized admission tests, not only the SAT and LSAT.

48/ Since the coaching schools are advertising in effect to a captured audience they can reach all potential enrollees by using low cost techniques such as posters and school newspapers. The Stanley H. Kaplan Educational Center estimates 80% of its students attend due to referrals not advertisements. See, Transcript of Investigational Hearing of Stanley H. Kaplan, dated May 6, 1976, p.40. Although many coaching schools advertise in large newspapers such as the New York Times, we perceive this is an attempt to reach parents more than students.

to a minimum of $40. Their courses ranged in duration from 40 hours (10 sessions at 4 hours each) of classroom indstruction plus unlimited use of library tapes and homework to a minimum of a one-day 8 hour seminar. Not surprisingly, the most expensive courses had the longest duration, and the least expensive courses had the shortest duration.

All preparation courses offer written materials as well as lectures. Their materials consist either of the commercially available review books 49/ or materials designed by the coaching schools themselves. By and large the majority of the materials consists of numerous examples of question types appearing, or expected to appear, on the various standardized examinations. One coaching school has an extensive tape library where over 200 hours of additional preparatory instruction is available.

The larger coaching schools have staffs of researchers who are constantly updating materials and writing practice examination questions. One school is so vigilant in its quest to keep current its materials that it pays individuals to take a standardized admission examination for the sole purpose of

---

49/ We have not endeavored to analyze the effects of merely using one of these review books without attending a formal coaching course. Such use by subjects in our control groups would of course bias our findings against the coaching schools.

remembering the examination questions.50/ The value of this practice is questionable. A study was commissioned by the College Board because it was believed some operators of coaching programs obtain some items that have been included in past editions of the SAT. The coaching materials consisted of actual items that later appeared on the SAT the subjects would take. The author concluded that "...even if it were possible to coach with as many as one-tenth of the items that would be used on a future form of the SAT -- a virtual impossibility -- the effect on the scores of students coached with these items would be negligible."51/

There is much variance among the techniques used by coaching schools. They cover a continuous spectrum. The simplest approach is teaching solely test-wiseness which is devoid of substantive content and mainly concerned with exam taking techniques. A more elaborate technique is short-term instruction (STI). This is a relative term which includes both elements of test-wiseness and substantive content. The

---

50/ See, Transcript of Investigational Hearing of John Sexton, February 9, 1977, p. 41-42.

"I wouldn't want ETS to know our operation, but let me say that we do have people who take the tests for us which obviously is a way of monitoring."

51/ French, John W., An Answer to Test Coaching, College Board Review, No. 27, Fall 1955, p. 5-7.

duration of instruction is short compared to the amount of time the test administrators would have us believe it takes to develop the abilities (over a lifetime) that standardized admission examinations measure. The most elaborate teaching technique employed by the coaching schools is intermediate-term instruction (ITI). ITI is of the same nature as STI although somewhat longer in duration. It is however of relatively short duration when compared to the amount of time generally considered necessary for substantial changes in test scores to occur.52/

Although there is no bright line that serves to determine where one of these approaches ceases and another begins, both the nature of the materials used by test preparation services and the length of instruction leads us to conclude that the majority employ short-term instruction techniques. Organizations offering formal instruction for a weekend or less engage in teaching solely test-wiseness. The Stanley H. Kaplan Educational Center, Ltd. (provided the 200 hours of library tape are used) may be viewed as offering intermediate-term instruction.

Almost all teachers at the coaching schools have obtained or are in the process of obtaining graduate degrees. Another

---

52/ See, n. 25, at 4-5, supra.

almost uniform requirement for teaching at a coaching school is scoring extremely high (minimum of 650) on one or more standardized admission examinations.

Although we have confined our initial inquiry to LSAT preparatory curses in the metropolitan areas of Boston, New York, Chicago, and Los angeles and our SAT inquiry to preparatory courses in the metropolitan New York area, we are aware of commercial coaching schools existing in every state and in virtually every major city or college campus throughout the country for all standardized admission examinations.53/

Although the coaching school industry may not be large in terms of annual sales by some standards, the industry structure already exists which enables it to reach any of the approximately 2,500,000 individuals who annually will be

---

53/ A list of some of the locations of coaching schools follows;

Brooklyn; Buffalo; Manhattan; Syracuse; Albany; Ann Arbor; Atlanta; Augusta; Austin; Birmingham; Boston; Champaign; Chicago; Charleston; Cleveland; Columbus; Dallas; Denver; Detroit; Durham; East Brunswick; Gainsville; Houston; Indianapolis; Jacksonville; Kansas City; Los Angeles; Louisville; New Orleans; Omaha; Palo Alto; Philadelphia; Pittsvurgh; Portland; San Francisco; Seattle; St. Louis; Tallahasee; Tampa; Washington D.C.; Toronto; Lugano, Switzerland; Euclid, Ohio; Clinton, Iowa; Knoxville; Boulder; Fort Worth; Baton Rouge; Baltimore; Montreal; Columbia and Greenville, South Carolina; Miami; Harrisburg; Oxford, Jackson, and Columbus, Mississippi; Orlando; Tuscaloosa, Opelika and Mobile, Alabama; Lexington, Murray, Maehead, and Bowling Green, Kentucky; Fayetteville; Little Rock and Jonesboro, Arkansas; Phoenix; Tuscon; Milwaukee; Madison; Salt Lake City; and Utica.

taking a standardized admission examination. It has the potential to grow quite rapidly 54/ and to exceed annual sales of one-half billion dollars.55/ Furthermore there are almost no entry barriers to this industry.56/

The charts appearing on the following pages represent for each of the entities we have specifically examined, name of the coaching school, total annual sales (1975-1976), number of students enrolled (Oct. 1974 - Dec. 1976), advertising expenditures (1976), cities where courses are offered, dates when courses have been offered up to December 1, 1976, costs of the course, and length of the course.

54/ Harcourt Brace has recently acquired a coaching school (LSAT METHOD). This acquisition by a $300 million conglomerate is further evidence of the potential for rapid annual sales expansion of this industry.

55/ Assuming each of the 2,500,000 students who takes a standardized admission examination each year enrolled in a coaching school at an average cost of $200, the industry would have annual sales of $500,000,000.

56/ Franchisees of the Evergreen course, for example, must pay only $200 upon execution of the franchise agreement and then 33 1/3% of the gross up to $90,000 and 15% of the gross over $90,000. See, Category III File 772 3000, Vol. XLIX, p.45. In this vein it is of interest to note that there are numerous high school and college teachers coaching small groups of students for standardized exams on a part time basis, and we are unaware of any state imposed licensing restrictions.

NAME OF ORGANIZATION	TOTAL ANNUAL SALES 1975-1976	NUMBER OF STUDENTS 10/74-12/76	1976 ADVERTISING EXPENDITURES (Dollars)	CITIES WHERE OFFERED	DATES OFFERED	COST OF COURSE	LENGTH OF COURSE
Stanley H. Kaplan Educational Centers Ltd.	7,834,093 1/	4975 2/ 1504 3/	209,357	over 50 cities in U.S. plus Toronto and Lugano, Switz.	Prior to 10/74-12/76	$250-LSAT $225-SAT	10 weeks at 4 hrs./wk.
Amity Review Course	267,000 1/	677 4/ 1500 5/	26,001	over 20 cities in U.S.	10/75-12/76	$175 or $125	30 hours or weekend
John Sexton's LSAT Review Course	511,484 6/	3020 6/7/	40,000 8/	NY, Bos., DC, LA, Houston, Tampa, and others	Prior to 10/74-12/76	$95 $150 $250	18 hours 28 hours 40 hours
Law School Admission Test Review Course (Evergreen)	236,547 9/ 43,667 10/ 9,220 11/	1738 12/ 1216 13/ 367 10/ 187 11/	30,000	In excess of 60 locations in U.S. and Canada	Prior to 10/74-12/76 2/75-12/76 10/	$125 $250	30 hours 40 hours

1/ Nationally for all exams

2/ Bos., NY, Chi., LA (LSAT)

3/ NY only (SAT)

4/ Bos., Chi., NY, LA only (LSAT)

5/ Nationally (LSAT)

6/ Includes NY, franchisees in LA and NJ

7/ No records of students exist prior to 7/75

8/ Estimated.

9/ Includes $64,270 received from franchisees as commissions, does not include MCAT revenue

10/ LA franchisee

11/ Chi. franchisee

12/ LSAT for NY/NJ area only. Does not include 200 scholarships per year

13/ Due to poor record retention this represents number of names in our possession. Approximately 75 are missing for 12/76, 75 for 2/76, and 538 for 4/75 and 7/75

NAME OF ORGANIZATION	TOTAL ANNUAL SALES 1975-1976	NUMBER OF STUDENTS 10/74-12/76	1976 ADVERTISING EXPENDITURES (Dollars)	CITIES WHERE OFFERED	DATES OFFERED	COST OF COURSE	LENGTH OF COURSE
AMS Educational Services	33,000 14/	186 15/	unknown	NY/Boston	10/74-12/75	$239 $179	20 hours
Rutgers Review Center (ARC)	18,941 14/ 60,166 16/	126 15/ 417 16/	33,000 est.	NY/NJ	10/75-12/76	$85 $115 $195	20 hours (weekend) 7 sessions = 28 hours. 44 hours (11 sessions)
LSAT METHOD	15,000 appx.	283 17/ 485 18/	10,000	LA.,SF.,SD., Salt Lake City	10/75-12/76	$40	1 day (8 hours)
Western States Review	42,526	115 17/ 500 18/	5,000 est.	LA, SF, Seattle Honolulu	10/75-12/76	$85	16 hours (2 days)
Test Prep Chicago	43,471	171	unknown	Chicago	2/75-12/76	unknown	unknown

14/ LSAT only

15/ LSAT only (also offered courses for other exams)

16/ All courses total

17/ LA only

18/ All cities total

NAME OF ORGANIZATION	TOTAL ANNUAL SALES 1975-1976	NUMBER OF STUDENTS 10/74-12/76	1976 ADVERTISING EXPENDITURES (Dollars)	CITIES WHERE OFFERED	DATES OFFERED	COST OF COURSE	LENGTH OF COURSE
Test Prep Boston	32,400	48 19/ 205 20/	2660	Boston, Amherst, MA	9/75-12/76	$149	6 meetings (24 hours)
Columbia Test Preparation Institute	62,600	514 21/	9000	NY	5/75-12/76	$135	6 meetings (24 hours)
Law Board 22/ Review Center	34,907	102 22/	3000 est.	thruout United States	Prior to 10/74-12/74 10/75- 7/76	$85	10 hours (one weekend)
Creative Educational Services	3,960	38 23/	1200	LA., SF	10/76-12/76	$60 $160	13 hours 24 hours
Law Boards Institute	9,500	70 24/	negligible	NY	7/75- 7/76	$154 $88	30 hours 16 hours
American Tutoring Service	5,400	50	unknown	NY	10/74-12/76	$100 - $175	20 hours (5 sessions)
Guidance Center	8,745	9 25/	8375	LA	7/76-10/76	$125	20 hours

19/ LSAT only

20/ Total all exams

21/ All exams, Doesn't coach LSAT

22/ Including franchises in NY area only

23/ LA only

24/ Estimated

25/ LSAT only

NAME OF ORGANIZATION	TOTAL ANNUAL SALES 1975-1976	NUMBER OF STUDENTS 10/74-12/76	1976 ADVERTISING EXPENDITURES (Dollars)	CITIES WHERE OFFERED	DATES OFFERED	COST OF COURSE	LENGTH OF COURSE
Dulac	46,952 26/	10 27/	negligible	NY	Prior to 10/74-12/76	$110 - $135	10 hours (private)
A. Mandell Education Center	negligible	16 28/	negligible	LA	unknown	unknown	unknown
McBurney YMCA	unknown	18 160 29/	negligible	NY	7/75-10/75	unknown	unknown
College Entrance Testing Service	14,200	142 30/	unknown	NY	prior to 4/75-11/75 4/76-11/76	$100	30 hours
College Skills Center	unknown	incomplete records	negligible	NY	prior to 10/74	$195 $65	30 hours 6 hours
Test Preparation Center, Inc. NY	88,777	595 30/	4723	NY	unknown	$75	24 hours

26/ Includes all courses

27/ LSAT

28/ All courses

29/ Total 1973 - 1975. 142 occurred before relevant time frame.

30/ SAT only (Some names may be missing).

B. NOT-FOR-PROFIT

We have been aware from the outset that the not-for-profit segment of this industry was one which required our attention.57/ There are a large number of undergraduate colleges and universities that offer preparation for admission tests to graduate schools.58/ It is ironic that colleges and universities offer preparatory courses. If they truly believe that coaching is effective for graduate standardized admission examinations then it seems logical they would concede coaching is effective for the SAT. Yet these very schools employ the

---

57/ See Circulation by Commissioner Dixon, Category I File 762 3033, Vol. I, p. 85, wherein he stated:

> I have no objection to this investigation, but I would urge staff as it seeks to formulate standards for the advertising of this respondent to ask itsemf how the not-for-profit segment of this industry would stack up against those standards. While two wrongs (if that is what is involved here) do not make a right, we should be careful in areas such as this, where the underlying issues may involve some measure of controversey and novelty, that the effect of our actions is not merely to create a double standard, disfavoring the entrepreneur without eliminating the source of the ailment.

58/ See generally, Category II File 772 3000, Vol. I, p.27-50. Among those offering such courses are Columbia University (LSAT), Bentley College (LSAT), Fordham University (LSAT), California State University (LSAT), University of Michigan (LSAT), Boston College (LSAT), American University (LSAT), Cornell University (LSAT), Puget Sound (LSAT), Monrovian (LSAT), Colby (LSAT), Adelphi (LSAT), University of Mass. (LSAT), Amherst (LSAT), Boston University (LSAT), Scranton (LSAT), Mt. Holyoke (LSAT), Chatham (LSAT), Washington University (LSAT), Trinity (D.C.) (LSAT), and University of Houston (GRE).

SAT as a prerequisite for admission and as a predictor of academic success. Furthermore if these colleges believe the SAT is coachable then they are employing an unreliable, invalid predictor, and they believe it is not coachable then by analogy the graduate admission examinations are not coachable and they are wasting students' time and money.

Tne not-for-profit segment of this industry can attempt to rationalize its offering of preparation courses for graduate schools in a number of ways. First, the not-for-profit courses are usually offered at no charge or at a minimal charge to cover overhead.59/ Second, some members of the not-for-profit segment of the industry offer coaching as a means of diverting students from the commerical courses. They believe that coaching (including their own) serves as no benefit but it is better to serve no benefit gratis than it is for up to $250.60/ Third, the not-for-profit coachers may believe

---

59/ See Category III File 772 3000, Vol. I, p.43. Statement of Fordham University. (no charge).

60/ See File 772 3000, Physical Exhibit Q p.4, and Category III File 762 3033, p.33-36. See also, Pre Law Guidebook of Boston College, Chestnut Hill, MA (1974) p.64, where it is stated you can prepare for the LSAT "... to the extent of becoming familiar with the types of questions asked. It has been my experience that a thorough perparation with the questions that are offered in the Pre-Law Handbook, the Admissions Bulletin and the $5 Arco or Barrons preparation book will eliminate the need for expensive professional pre-law courses." Yet, Boston College offers an LSAT preparation course for a fee of five dollars. (The fee is to cover costs of overhead and printing).

that they are effective. Realizing the importance of standardized admission examinations in the graduate school process they may feel that by increasing the scores of their undergraduate students they increase these students' opportunities for graduate school admission and therefore enhance their own undergraduate school's reputation.

Not only does the not-for-profit segment of the industry charge minimal or no tuition but they also engage in virtually no advertising. Furthermore their enrollments are rather small.61/ The not-for-profit segment of the industry, although existing at many schools, has a small total enrollment 62/, charges de minimus fees, and does not advertise.

There is one notable exception to the general description of the not-for-profit segment of this industry that we have discovered. Recently, for a fee of $125.00, St. John's University in New York began advertising for an SAT Prep Course.63/ Not only was this fee comparable to that charged by some of the commercial entities but the literature distributed was

---

61/ Columbia U. enrolled 40 students from 1974-1977. See Category III File 772 3000, Vol. I, p. 28.

62/ Probably not more than 5000 students nationally.

63/ See Category III File 772 3000, Vol. I, p.70.

"commercial" in nature.64/ This is the only instance in which we found a university offering a coaching course for the very examination it uses in determining, at least in part, who will gain admission.65/

We have not discussed the not-for-profit coaching that occurs in public and private high schools across the United States for the SAT. These are largely unadvertised, voluntary, non-fee courses and as such would not cause any economic harm to the student taking one, although they would be a waste of time if valueless, but would result in social and economic harm to those who are denied access to them if they are beneficial. Due to the nature of the statistical analysis of the SAT the inclusion of these entities in our inquiry is not necessary but we will as a by-product make recommendations concerning means of offering a gauge of their effectiveness.

64/ Id.

65/ For the full text of an interview with a dean of St. John's University regarding its SAT preparation course and his rationalization for its existence, See Category III File 772 3000, Vol. I, p.71.

VII. STATISTICAL AND COMPUTER METHODOLOGY

The reader who has little interest in the complexities of statistical and computer methodology may bypass this section without a loss in continuity. The following section, "Statistical Findings" details the analytical results of this inquiry.

A. Purpose of Study

The statistical study determines whether commercial coaching courses can significantly increase students' SAT and LSAT scores. If commercial coaching were found to be effective, a secondary study purpose was to determine whether various commercial courses vary in effectiveness. Particular study questions were as follows:

(1) Are SAT and LSAT scores of coached students significantly higher than the scores of comparable students who are not coached?

(2) If coaching is effective, what is the estimated size of score increase attributable to coaching?

(3) If coaching is effective, does its impact vary among different types of students?

To the extent that coaching can improve students' scores on the SAT and LSAT, questions may arise concerning test design, interpretation of test results, and perhaps the precise nature of what such tests are measuring. Although intriguing, such questions are beyond the scope of this statistical study. The sole purpose of this study was to estimate statistically the impact of commerical coaching upon SAT and LSAT scores.

B. Alternative Approaches

Two major alternative approaches exist for estimating the effects of coaching upon SAT and LSAT scores. The first approach is to conduct an experiment. The second approach is to treat an existing situation as if it was an experimental result.

Conducting a coaching experiment requires defining two comparable groups of students. Members of the experimental group enroll in coaching courses, while members of the control group receive no coaching. The purest methods to acquire these two groups would be to deny access to commercial coaching on a random basis to one-half of the potential coaching school enrollees, or treat the control groups with a placebo. If the experimental and control groups are in all other ways similar, then SAT and LSAT score differences between the groups would be attributable to coaching.

Analysis of existing circumstances requires identifying students who voluntarily enroll in coaching courses. Also identified are students who choose not to enroll in coaching courses. These two groups correspond, respectively, to the experimental and control groups of the first approach. As with the experimental approach, if the enrollee and nonenrollee groups are in all other ways similar, then SAT and LSAT score differences between the groups are attributable to coaching.

Both approaches have their benefits and detriments. The experimental approach is preferable because it avoids self-selection of enrollees into coaching schools and because it assures that the presumably uncoached students are in fact uncoached. Self-selection can be important if students attempt the SAT or LSAT under severely competitive conditions. Under such conditions, aggressive individuals intent upon improving their test scores might be more likely to enroll in a commercial coaching course than their less competitive or less affluent counterparts. Also, students whose first SAT or LSAT attempt produces unexpectedly low scores may be more likely to elect commercial coaching than students whose first exam score more closely matches their expectations. If aggressive attitudes lead to better exam scores even without coaching or if coaching school enrollees are mostly students receiving unexpectedly low first scores, then score gains or differences attributable to coaching may contain a self-selection component. That is, self-selection may lead to an overestimate of coaching benefits.

Conversely, a nonexperimental control group may lead to an underestimate of coaching benefits. That is, presumably uncoached students may in fact receive some form of coaching other than formal enrollment in a commercial coaching course. They may for example attend courses given by the not-for-profit segment of the industry, engage in extensive self-preparation,

or attend a commercial entity surreptitiously due to a desire to receive coaching. These unmonitored efforts, if they occur and if they are effective, should tend to increase the average test scores of the allegedly uncoached students. These increased scores, containing a component properly attributable to coaching, tend to shrink the apparent benefit from commercial coaching.

On purely theoretical grounds the experimental approach may be preferable. However, the experimental approach is expensive, lengthy, and in the real world almost an impossibility as it would require denying access to commercial coaching to subjects who want it, or to treat them with a placebo. Also it would have conflicted with our investigative goals in that a sufficiently large sample for statistical purposes is unlikely to remain a secret from the coaching schools. Coaching provided in awareness of an experiment may differ from the coaching normally provided. Since the purpose of this investigation was to evaluate commercial claims made for "normal" coaching provided in the absence of awareness of an experiment, and because of limited time and study resources, we used nonexperimental data.

C. Overall Study Design

Given the practical considerations of time, cost, and security, this study used a nonexperimental approach to

estimating the effects of coaching on SAT and LSAT scores.

The major study elements were as follows:

(1) definition of a study group of SAT or LSAT-takers;

(2) separation of coaching school enrollees from nonenrollees;

(3) establishment of subgroups with similar backgrounds; and

(4) comparison of coached and uncoached students within subgroups.

The major study assumptions were and are as follows:

(a) the study group is representative of SAT and LSAT populations;

(b) SAT and LSAT exams are comparable among administrations;

(c) coaching school performance is consistent during the study period; and

(d) the effects of enrollee self-selection, if any, and of coaching of presumably uncoached students offset one another.

A brief discussion of the study elements follows:

(1) Definition of study group. The study group definition began with coaching school enrollment lists obtained from the coaching schools. These enrollments contained student names, addresses, and course dates covering the testing years 1974-1975, 1975-1976, and 1976-1977. This 3-year study window was defined by several factors including:

(a) incomplete, illegible, or missing coaching school enrollment records prior to 1974; and

(b) a desire to avoid any confounding influence from long-term gradual declines in average SAT scores.

As previously indicated SAT coverage was confined to two coaching schools in the New York metropolitan area; LSAT coverage included coaching schools in the Boston, New York, Chicago, and Los Angeles metropolitan areas. Inspection of the student addresses allowed definition of the primary market areas served by the surveyed coaching schools in these metropolitan areas. These market areas are compact, contiguous areas which generate most of the coaching schools' enrollment. At the 3-digit level of Zip Code geography, the SAT market area for metropolitan New York was:

- 064-069 Connecticut
- 070-080 New Jersey
- 085-089
- 100-127 New York

The LSAT primary market areas were:

. 010-029	Massachusetts	Boston
. 070-080	New Jersey	New York City
. 085-089		
. 100-127	New York	
. 463-466	Indiana	Chicago
. 530-538	Wisconsin	
. 600-619	Illinois	
. 900-937	California	Los Angeles

Given these geographic market areas, CEEB, LSAC, and ETS then provided the test records for all persons located in these areas who attempted the SAT or LSAT during the study

window. This large group of persons, containing both coached and uncoached students, constituted the preliminary version of the study group.

(2) Separation of enrollees from nonenrollees. Separating enrollees from nonenrollees began with identifying coaching school enrollees within the large group tested during the study period. Essentially, this task consisted of taking a coaching school enrollee's name and address and searching the testing data until that person's testing history was found. The goal of this task was to establish for each person a compact data set containing the person's testing history, coaching history if any, and relevant biographical information.

For a variety of reasons, this proved to be a fairly formidable undertaking. LSAT statistical analysis began with 11,906 coaching school enrollments and 157,982 testing histories during the 3-year study window. Computer matching using zip code, surname, and first initial located 9,479 testing histories for coaching school enrollees. Subsequent manual matching, for enrollees whose testing histories were not found by computer search, located an additional 2,869 testing histories; the manual search was required because of the use of nicknames, misspellings, and the like.

For the 11,906 coaching school enrollments, we had now located 12,348 testing histories. Clearly, some persons had participated in more than one LSAT testing year. The

resulting search for the same persons in successive testing years shrank the total LSAT study group from a presumed 157,982 to an actual 132,003. Of these, some 7,981 had taken all their LSAT tests prior to test year 1974-1975; these persons were dropped from the study.

This left a group of 124,022, of whom 8,660 had a total of 9,029 coaching school enrollments, implying that the study contained at least a few people who had been coached more than once. In addition, scanning sample testing histories indicated that many people had attempted the LSAT more than twice. To make sense of this situation, the following table was produced:

		Number of times coached for LSAT						
		0	1	2	3	4	5	totals
number of LSAT attempts	1	81,575	3,722	69	0	2	0	85,368
	2	26,660	3,172	113	4	4	2	29,955
	3	6,093	1,146	69	7	2	3	7,320
	4	785	223	26	3	2	0	1,039
	5	190	56	9	0	0	0	255
	6	42	13	3	0	0	0	58
	7	13	5	0	0	0	0	18
	8	3	3	0	1	0	0	7
	9	1	1	0	0	0	0	2
totals		115,362	8,341	289	15	10	5	124,022

Inspection of testing histories suggests that these groups tend to perform rather differently on the LSAT. This finding

in turn suggests that comparability of enrollees and uncoached students required some assurance that apparent 1-time takers are in fact 1-time takers and contained no persons for whom the presumed single LSAT is really the first of two attempts or the begining of an extended LSAT taking career.

Because proper analysis of all combinations would have entailed research design complexity sufficient to overwhelm available sample sizes, and because 115,129 or 93% of the LSAT study group had the "normal" LSAT experience of fewer than 3 LSAT attempts and fewer than 2 coaching school enrollments, persons coached more than once or with more than 2 LSAT exams were excluded from the study.

The apparent 1-time takers, 2-time takers, and 3-time takers were used to conduct a "window analysis". The purpose of this task was to discover how far to narrow the study window so that students thought to be 1-time takers were indeed likely to be 1-time takers, and students thought to be 2-time takers were also likely to be 2-time takers. The actual analysis consisted of constructing time profiles of 2-time takers and 3-time takers. The time profiles indicated how many intervening LSAT exams passed between successive attempts. Because the latest LSAT coaching school enrollments were for December 1976, and because this group contained a considerable number of coached persons, we were extremely interested in

the effect of using that LSAT as the new boundary for the study window. The results were as follows:

percentage of LSAT repeaters with 3 or fewer intervening LSAT exams between successive attempts

	2-time takers	3-time takers	
	1 to 2	1 to 2	2 to 3
uncoached students	75.8	86.8	55.6
coached before 1st	89.0	96.1	63.0
coached before 2nd	82.4	86.1	65.6
coached before 3rd	----	88.0	56.0

Assuming that these time profiles of LSAT repeaters are stable through time, and because three LSAT administrations followed the December 1976 LSAT during the 1976-1977 test year (the test year commences in October and terminates in July), we can estimate that about 76% of uncoached 2-time takers whose first attempt occurred in December 1976 would, if they are destined to remain uncoached 2-time takers, appear for their second uncoached LSAT attempt before the end of the test year. A similar interpretation applies to the other percentages.

It would have been more comforting to work consistently at a level of 95%, but this would have required such a narrowing of the study window that all 1976-1977 test year data would have been discarded. Because the study group was about to shrink drastically, for reasons described infra, it was decided to leave the LSAT study window at October 1974 through December 1976 inclusive. In any event, the LSAT study group

was then partitioned into five subgroups based on coaching experience:

(i) uncoached 1-time takers;

(ii) coached 1-time takers;

(iii) uncoached 2-time takers;

(iv) 2-time takers coached before first exam; and

(v) 2-time takers coached between exams.

A similar adventure marked definition of the SAT coached and uncoached groups. An additional complication arose because the SAT testing histories arrived in fragments; that is, one person's data was likely to be found in several isolated pieces, even within a single testing year. As a result, the entire SAT data file was sorted alphabetically and a list of "candidate matches" was generated for each surname in the coached group. Because of use of nicknames, apparent misspellings, and variations in format of street address, manual search of these candidate matches was used to find the SAT testing histories of coaching school enrollees. Testing histories were located for 1777 of the 2286 SAT coaching school enrollees. Part of the failure to locate testing histories for all enrollees in both the SAT and LSAT files is of course attributable to the failure of a coached individual to utlimately take a standardized admission examination. Because the SAT data consisted of so many elements and was so scrambled, a sample of uncoached persons was felt to be the most reasonable

and efficient way of establishing a control group. The target sample size of 2500 was chosen to yield a control group comparable in number to the coached group. Systematic selection with random start was used for two reasons:

(i) unknown and apparently unequal fragmentation of individuals' testing histories removed the equiprobablity advantages of simple random sampling, which would ordinarily be used to allow statistical evaluation of results; and

(ii) selection of coached students was also nonrandom, since the coached group contained all students enrolled at the investigated coaching schools during the study period.

Choosing an integer between 1 and 150 from a table of random digits and then selecting that data record plus every succeeding 150th data record yielded a sample of 2597. The same type of "window analysis" as used for the LSAT showed that a December 1976 cutoff allowed working at the 95% level. As with the LSAT part of this study, the SAT study group was divided into five subgroups:

(i) uncoached 1-time takers;

(ii) coached 1-time takers;

(iii) uncoached 2-time takers;

(iv) 2-time takers coached before first exam; and

(v) 2-time takers coached between exams.

(3) Establishment of subgroups with similar backgrounds. The reason for establishing subgroups with similar backgrounds was to avoid bias either for or against coaching schools. The

reasoning was that intergroup ethnic, academic, or sex differences might lead to corresponding SAT or LSAT differences and, possibly, to differences in coachability. Therefore, by an extensive sorting of LSAT test scores we attempted to discover whether significant LSAT score differences existed, coaching aside, among groups defined by sex, ethnicity, cumulative grade point average (GPA), and combinations of these attributes. This sorting revealed that LSAT scores:

(i) vary moderately with GPA;

(ii) are markedley different for different ethnic (and racial) groups; and

(iii) display only slight differences for males versus females.

Therefore, as described infra, analysis of the effects of coaching was confined largely to whites.

Restricting attention to persons for whom biographical information was available further reduced the LSAT study group size. For instance, using a group whose LSAT exams fit within the study window of October 1974 through December 1976, whose GPA was known, and for whom no score irregularities were recorded produced the following study group.

	coached	uncoached
1-time takers	2,272	30,459
2-time takers	2,090	10,832

Requiring information on sex and ethnicity shrank the study group still further. Excluded here were persons whose

sex or ethnicity were unknown or whose records contained contradictory information, such as being black one year and oriental the next year. The resulting SAT study group then appeared as follows:

	coached	uncoached
1-time takers	1,571	22,136
2-time takers	1,259	6,651

Indians and orientals appear to perform differently on the LSAT when compared to other non-whites. Therefore, and because these groups comprise only a small part of the uncoached group and a miniscule portion of the coached group, they were excluded from further analysis. The resulting final definition of LSAT study groups is shown below; as used here, non-whites include blacks, chicanos, and puerto ricans.

	white	nonwhite
uncoached 1-time takers	18,947	2,438
coached 1-time takers	1,395	147
uncoached 2-time takers	5,729	781
2-time takers coached before first exam	672	54
2-time takers coached between exams	1,113	128

Fortuitously, the SAT study subgroups proved to have very similar socioeconomic profiles, so that no further pruning or subdividing was necessary to assure comparability. The only qualification for inclusion in the final group, for reasons described infra, was a Pre-Scholastic Aptitude Test

(PSAT) baseline score prior to the first-SAT administration. The resulting final SAT study subgroups were as follows:

uncoached 1-time takers	384
coached 1-time takers	109
uncoached 2-time takers	494
2-time takers coached before first exam	248
2-time takers coached between exams	246

(4) Comparison of coached and uncoached students. The basic approach to detecting coaching effects was quite straightforward. For both the SAT and LSAT portions of the study, a baseline was established to compare coached students against uncoached students. From this baseline were generated expected average test scores for coached students and for uncoached students. Direct comparisons of these average scores were then used to evaluate the effectiveness of commercial coaching.

PSAT scores furnished the SAT baseline, while undergraduate GPA provided the LSAT baseline. Both baselines were chosen because of availability, convenience, and apparent reasonableness. Although GPA is clearly inferior to PSAT on the basis of reasonableness, because of the universal uniformity of PSAT scores, it appeared to be the only available baseline for the LSAT when analyzing one-time takers.

For both the SAT and LSAT analyses, the technical approach was the same. Ordinary least-squares linear regression was used to generate conditional average exam scores for both

coached and uncoached students. Estimated impacts of coaching were then inferred from comparisons of these conditional averages.

The statistically sophisticated reader will immediately note the absence of fiducial lines around the linear regression estimates. This omission is deliberate. Strictly, fiducial lines can be drawn only where the underlying data is the product of sampling where sample selection probabilities can be calculated; because the calculations are convenient and well-known for simple random sampling, this approach is normally used. However, investigatory requirements and constraints of time and cost have prevented this statistically desirable approach. Fortunately, the difference between coached and uncoached student scores is sufficiently large that the absence of this formal statistical test appears to be a minor defect.

At this point it is of value to focus on the terms "control" or "uncoached". They have been used in the preceding discussion as well as in other parts of this memorandum and are used on labels on the charts and graphs appearing infra. These terms are somewhat misleading. We have not determined to a certainty that the "uncoached" or "control" groups have in fact been culled of all coached subjects. Some subjects may have attended a coaching school we have not identified, they may have undergone extensive self-preparation,

they may have been coached by the not-for-profit segment of the industry. For purposes of convenience we continue to use the terms "uncoached" or "control" remembering that due to the probability these groups are not pure we will have underestimated the benefits of coaching.

VIII. STATISTICAL FINDINGS

The following discussion analyzes with statistical methods the effects of coaching on the Scholastic Aptitude Test and Law School Admission Test.

It is important to keep in mind that although this document is meant to be self-contained, it does not include all of the different approaches and methods we have employed in attacking the problems we faced. For example missing from this discussion are histograms, frequency tables, and analysis by stratification (although this is in essence included in the regressions).

In order to fully understand the breadth of this undertaking it is essential to make an in-depth review of the technical appendices. However such a review is unnecessay to comprehend our findings.

The charts and graphs appearing in this section that analyze individual coaching schools are labelled with either a numerical or numerical/alphabetical code in lieu of a coaching school's name. These codes are present due to the convenience they afford in labelling. The codes corresponding

to the coaching schools names are found parenthetically in the text of this section after the mention of a coaching school. The full set of codes which must be utilized to decode coaching school names in the technical appendices are attached hereto as Appendix A.

A. THE SCHOLASTIC APTITUDE TEST

(1) SAT 1-time takers

Actual SAT scores for 1-time takers appear on pages 65-67. The first of these pages displays verbal and math scores for uncoached students. The second page shows verbal and math scores for students coached at the Stanley H. Kaplan Educational Centers, Ltd. in New York (SHK) (001A). The third page shows verbal and math SAT scores for students coached at Test Prep Centers in New York (022).

Pages 68 and 69 compare average SAT scores for coached students against uncoached students. These comparisons indicate that SHK (001A) is extremely effective in coaching 1-time SAT takers. Average verbal SAT increases attributable to SHK's (001A) coaching range from 40 to 76 points above the uncoached group. Students who score higher on the PSAT receive the greater benefits. Average score increases for the math SAT are 40 points above the gains of the uncoached group over the entire PSAT range. Students of SHK therefore who are coached in the period intervening the PSAT and the SAT,

and who take the SAT only once, show a combined net increase of between 80 to 116 points above a matched control group.

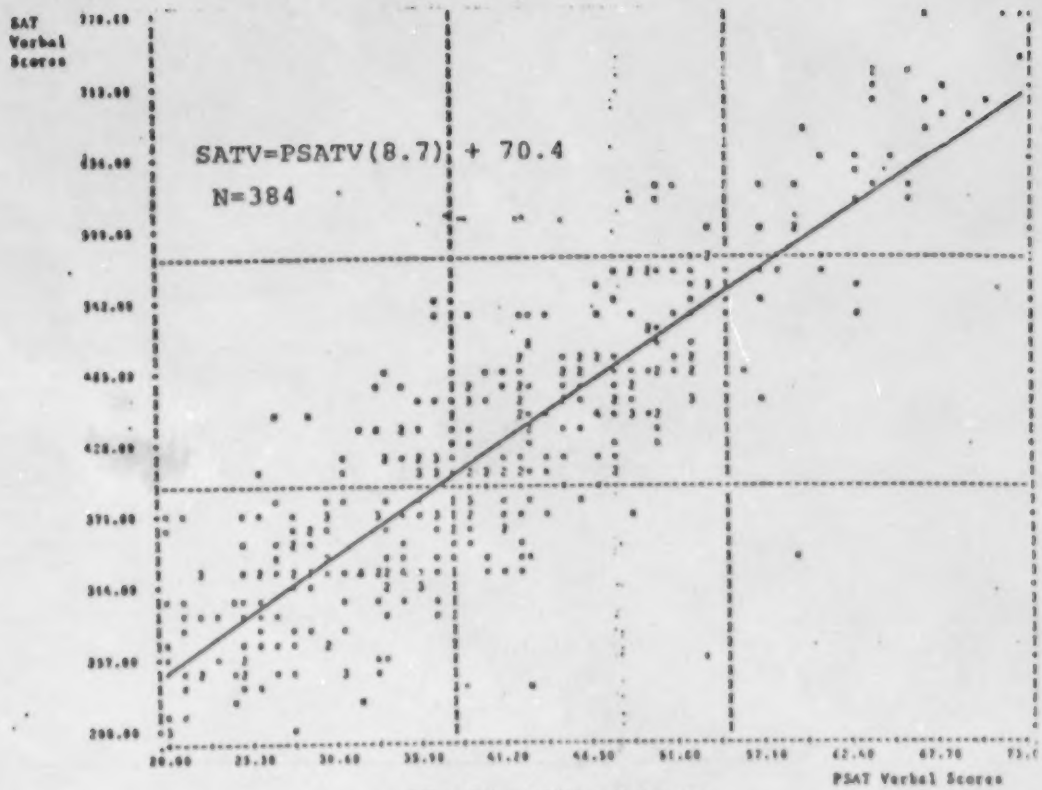
Although generally beneficial, Test Prep Centers (022) appears to be somewhat less effective than SHK (001A) for 1-time takers of the SAT. Average verbal score margins for students coached at Test Prep Centers (022) range from an increase of 60 points for low-PSAT students to a decrease of 33 points for high-PSAT students compared to the uncoached group. Conversely, average math SAT score differences range from an increase of 8 points for low-PSAT students to an increase of 40 points for high-PSAT students above the gains of the uncoached students. The total net benefit for 1-time SAT takers at Test Prep Centers (022) can be calculated to be between a range of -25 to +100 points compared to the uncoached group.

To amplify on the preceding analysis SHK (001A) shows a gross verbal SAT increase from PSAT verbal of between +84 to +42 points from the low-PSAT to high-PSAT verbal scores. The corresponding control group shows an increase of +44 SAT points at the lowest PSAT verbal score to a decrease of -34 points at the highest PSAT verbal score. Therefore the net benefits to SHK (001A) students range from +40 SAT points at the low end of the PSAT range (+84-+44) to +76 SAT points at the high end of the PSAT range (+42- -34).

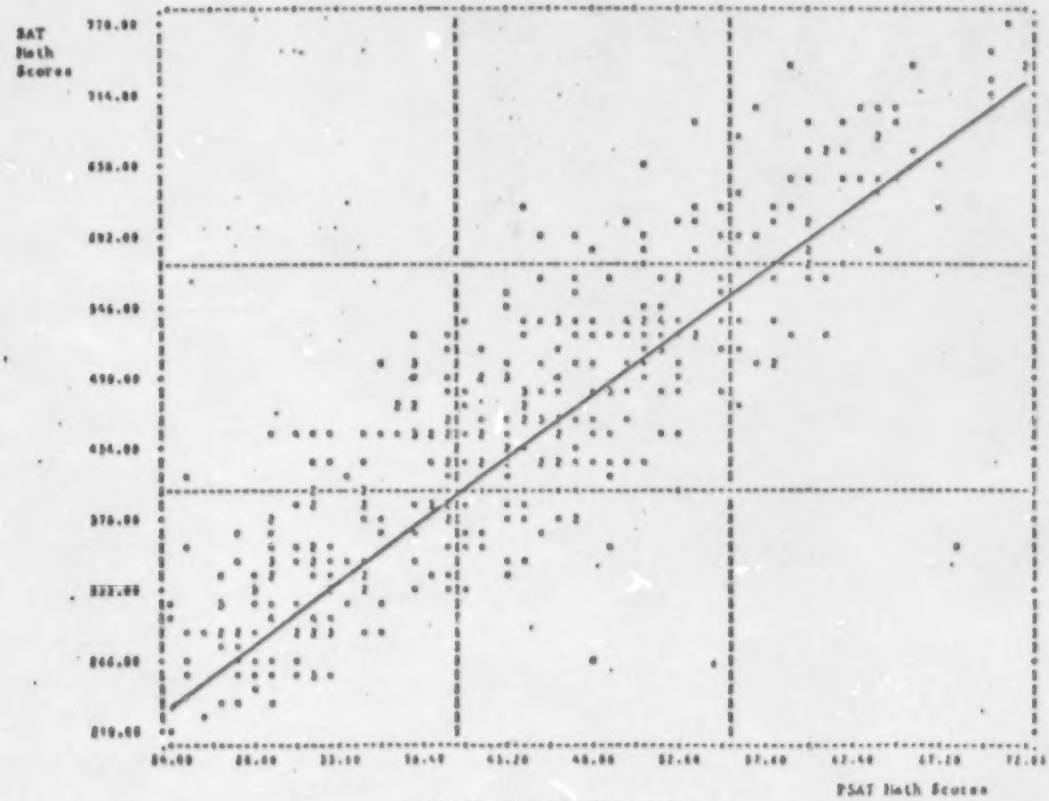
Correspondingly SHK (001A) shows a gross math SAT increase of +68 to +39 SAT points from the low to the high end of the PSAT math range. The matched control groups shows an increase of +22 to a decrease of -3 SAT math points from the low to the high PSAT range. The net benefit therefore to SHK (001A) 1-time takers for the math SAT is roughly 40 SAT points over the entire PSAT range (+68 - +22 = +46 to +39 - -3 = +42).

This type of analysis can be done for each of the scattergrams presented here by merely inserting the appropriate figures into the formulas representing the regression lines.

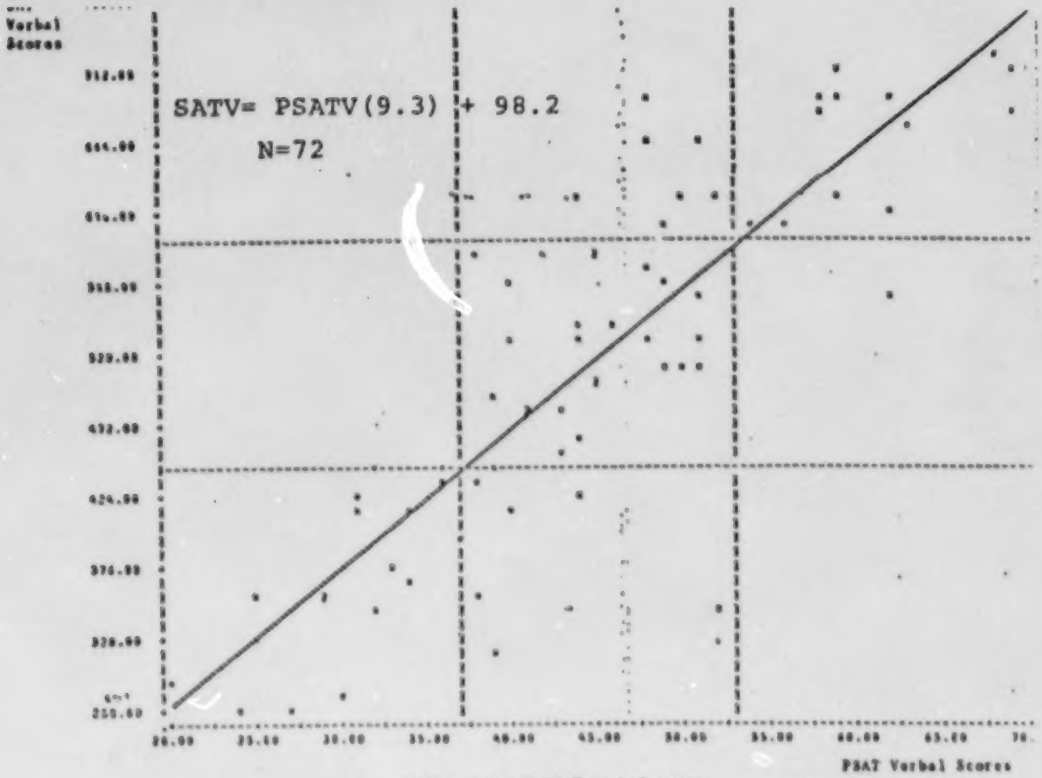
It is important to note that the figures recited in the preceding analysis are conditional average figures based on the equation of the regression line. The actual score increases or decreases may be considerably larger or smaller as can be seen from the plots of the scattergrams.



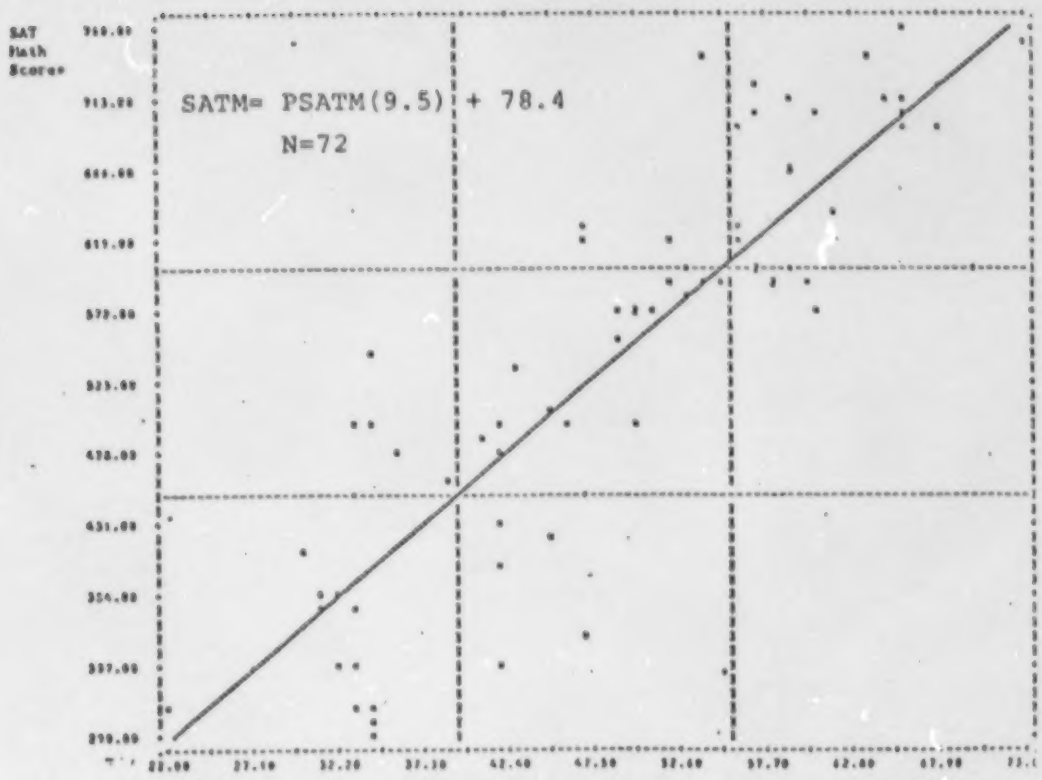
SAT verbal and PSAT verbal scores
for uncoached 1-time takers of SAT



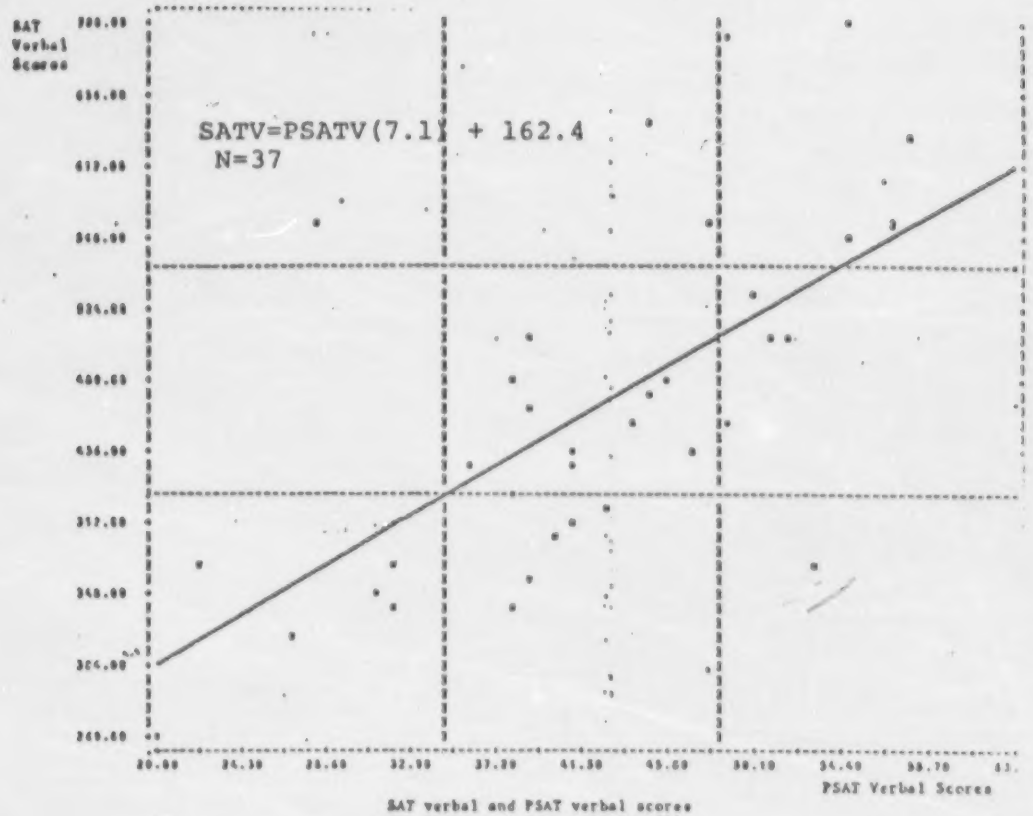
SAT math and PSAT math scores
for uncoached 1-time takers of SAT



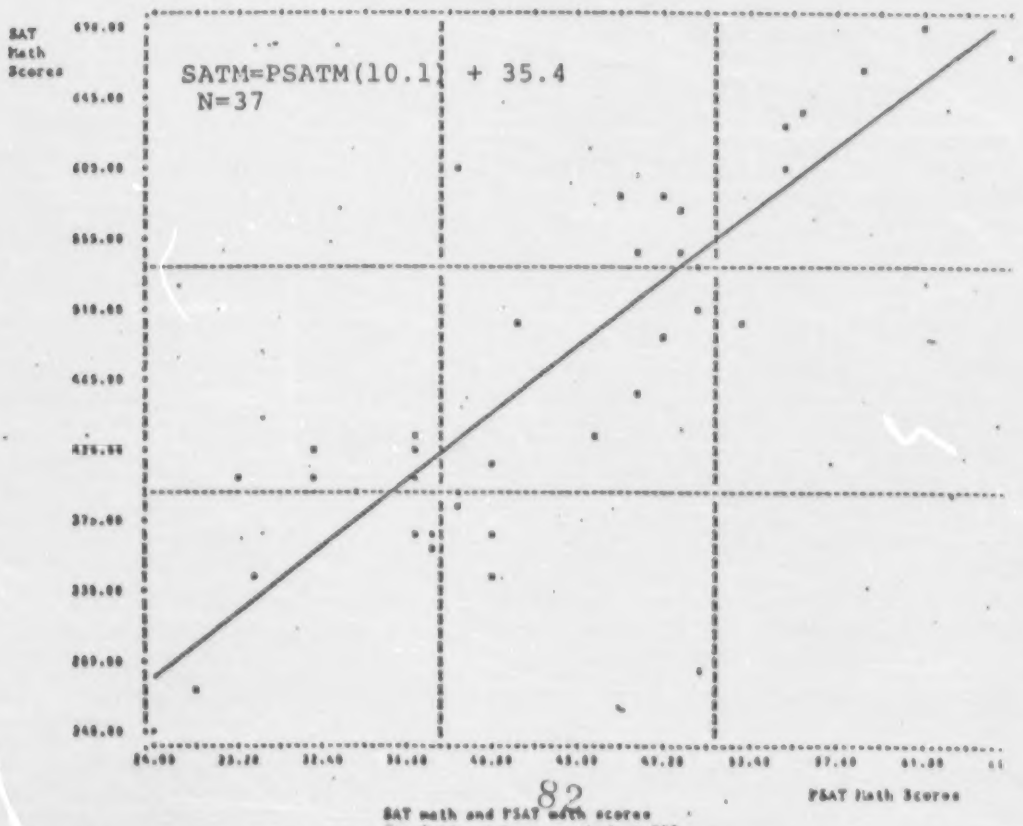
SAT verbal and PSAT verbal scores
for 1-time takers coached at 001A



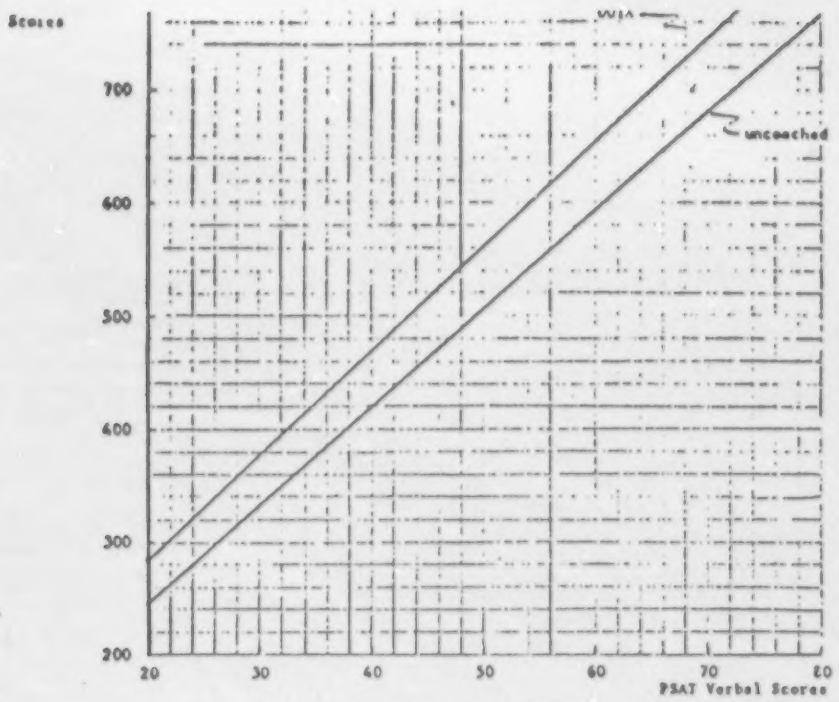
SAT math and PSAT math scores
for 1-time takers coached at 001A



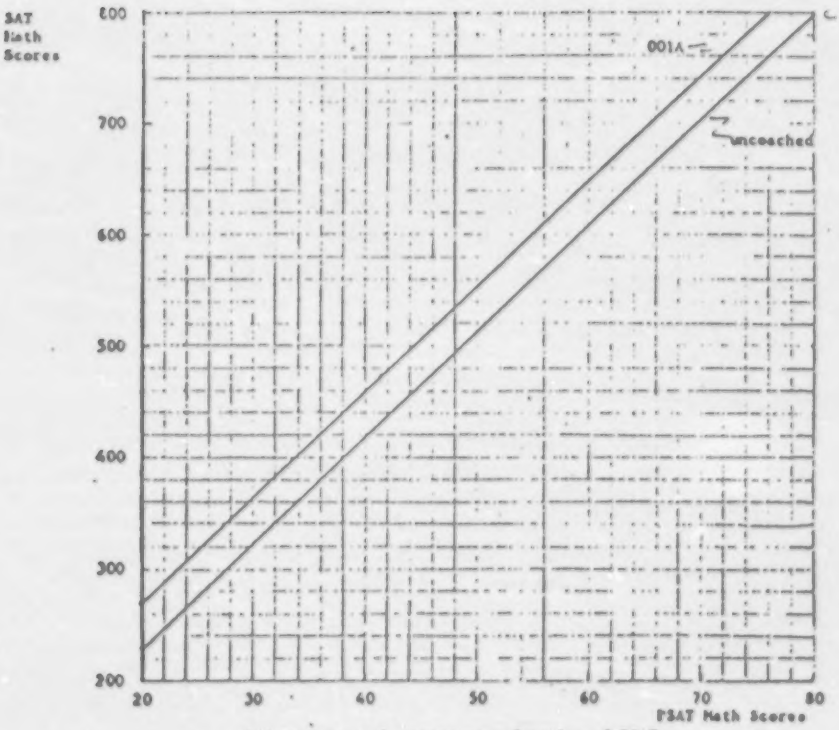
SAT verbal and PSAT verbal scores
for 1-time takers coached at 022



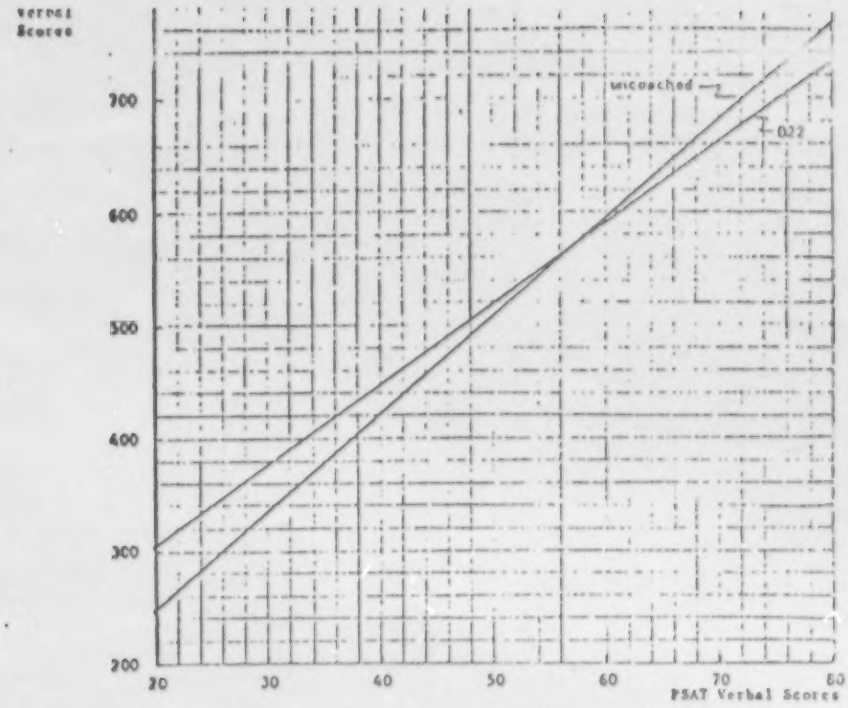
SAT math and PSAT math scores
for 1-time takers coached at 022



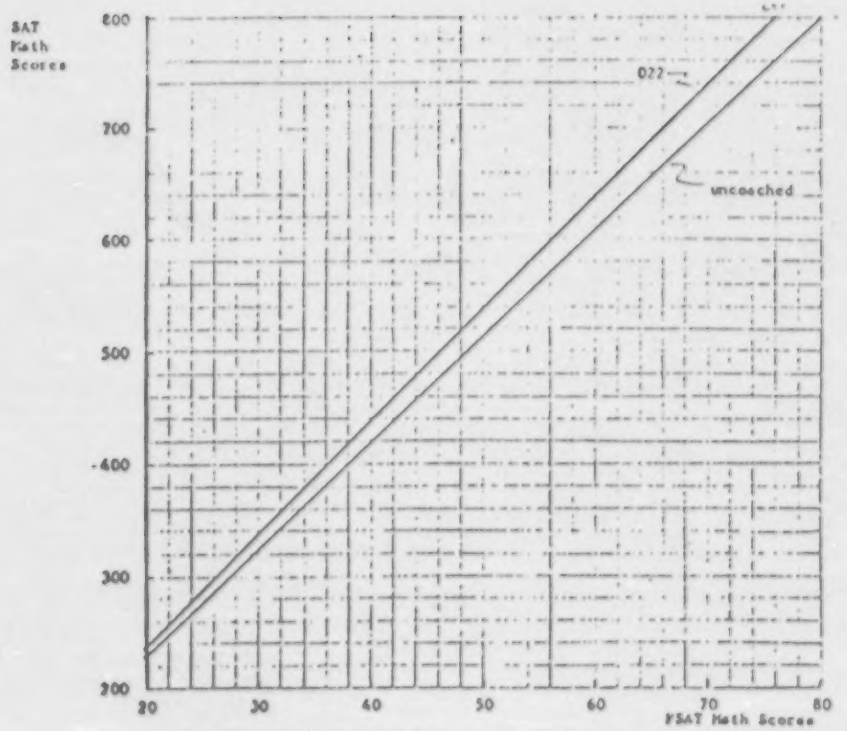
SAT average verbal scores as a function of PSAT verbal scores for 1-time takers, comparing 001A enrollees against uncoached students



SAT average math scores as a function of PSAT math scores for 1-time takers, comparing 001A enrollees against uncoached students



SAT average verbal scores as a function of PSAT verbal scores for 1-time takers, comparing 022 enrollees against uncoached students



SAT average math scores as a function of PSAT math scores for 1-time takers, comparing 022 enrollees against uncoached students

(2) SAT uncoached 2-time takers

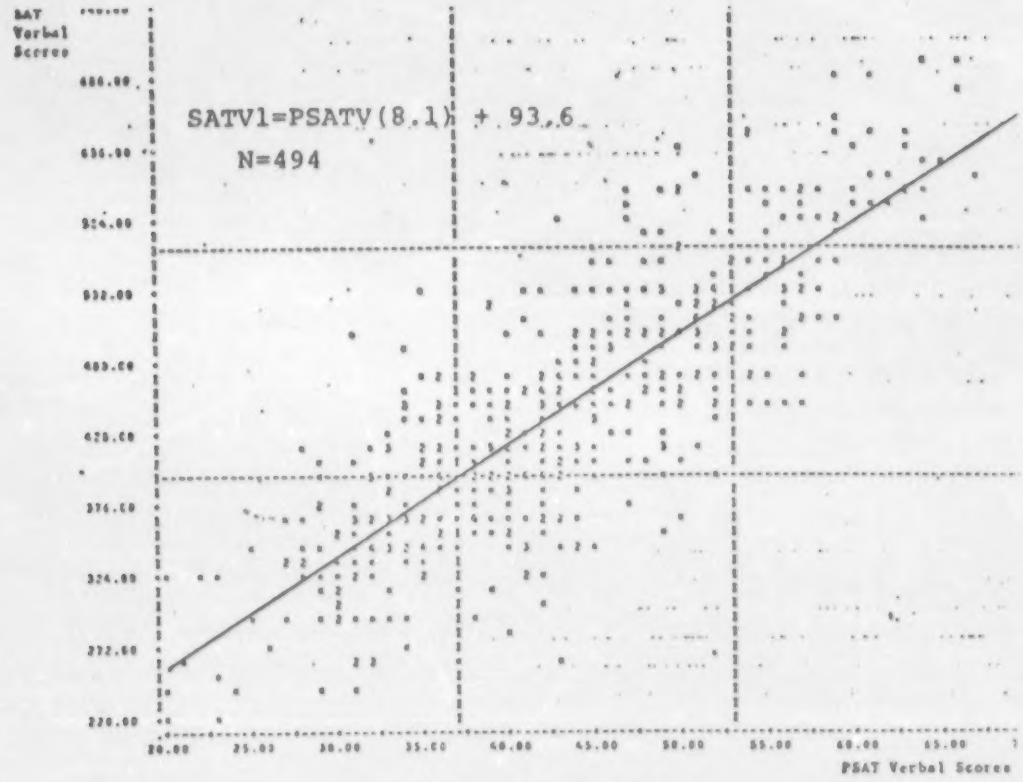
Actual SAT scores for uncoached 2-time takers of the SAT appear on pages 71 and 72. The first page displays first-SAT and second-SAT verbal scores. The second page displays first-SAT and second-SAT math scores.

Page 73 compares average SAT scores for the students' first and second attempts. For both verbal and math scores, SAT improvement for uncoached students appears to be proportional to PSAT scores; a similar improvement pattern is shown later for uncoached white 2-time takers of the LSAT.

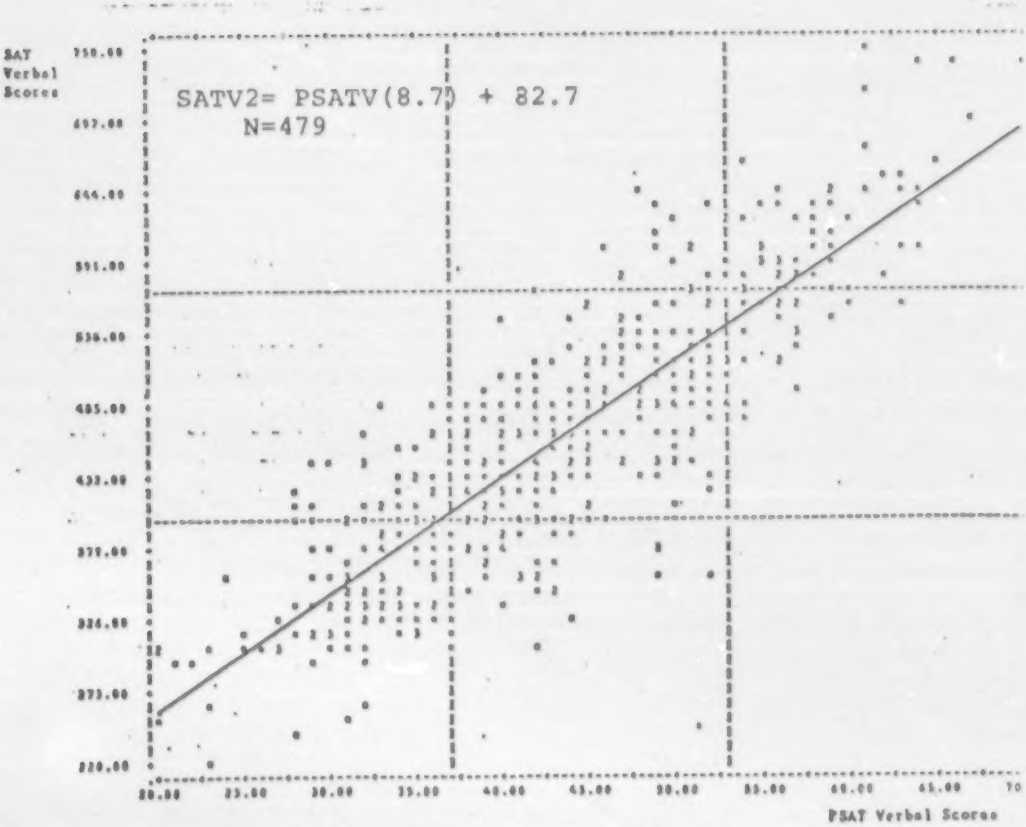
The precise meaning of this improvement pattern is not clear. Possibly, two factors are at work:

(a) Persons with higher initial test scores tend to continue to develop further than those with initially lower test scores; and

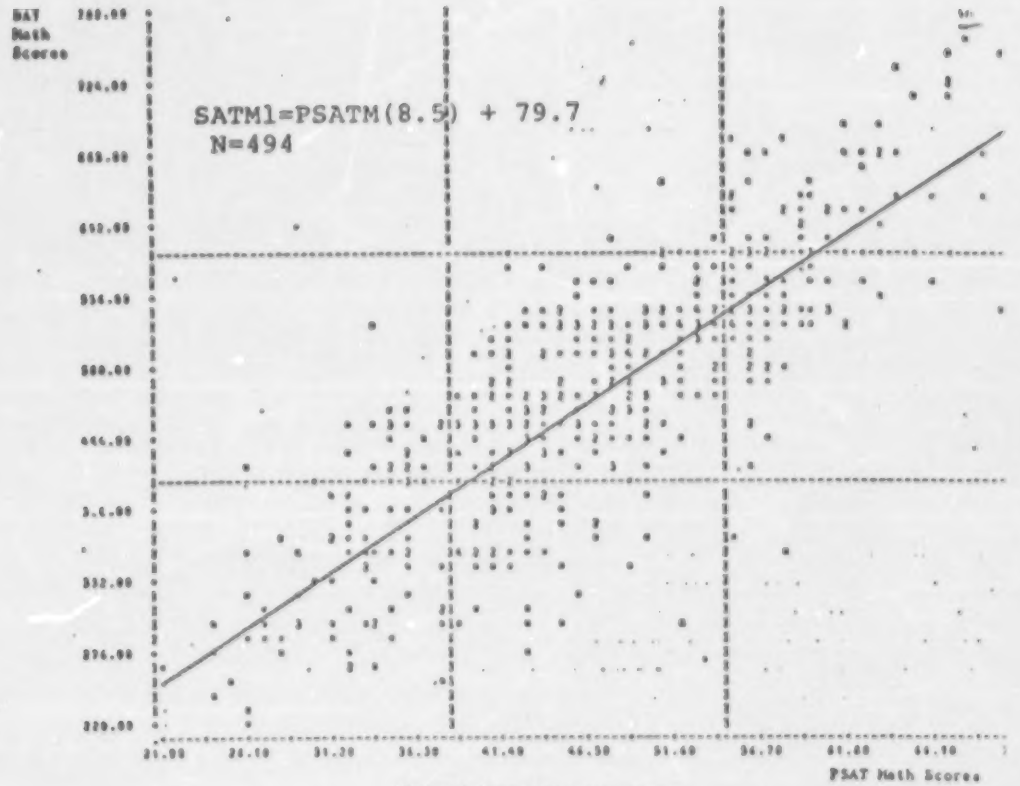
(b) Persons with higher test scores find the SAT somewhat "learnable" even without coaching. The fact that a similar score growth pattern occurs for uncoached white 2-time takers of the LSAT, who are presumably already mature and unlikely to exhibit the rate of aptitude growth of younger SAT students, tends to support this hypothesis.



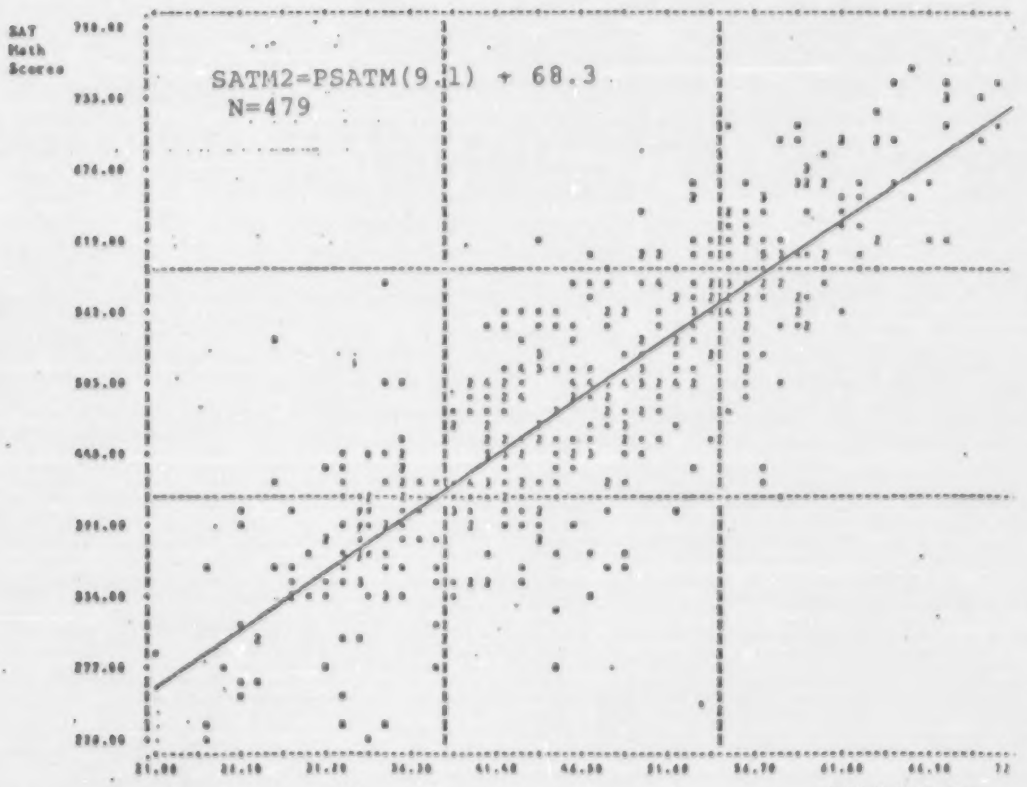
PSAT and first-SAT verbal scores
for uncoached 2-time takers of SAT



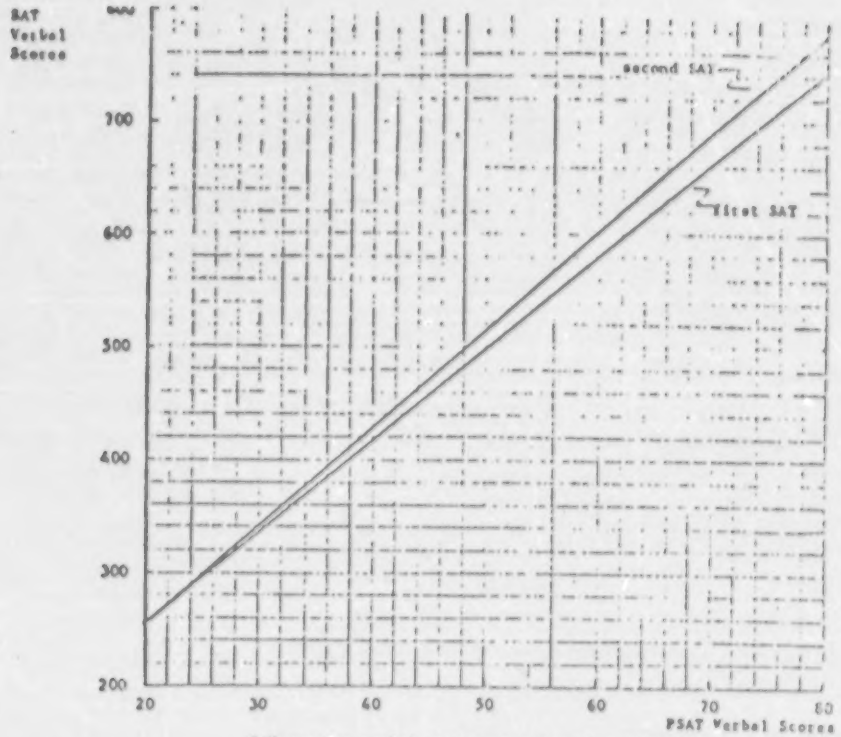
PSAT and second-SAT verbal scores
for uncoached 2-time takers of SAT



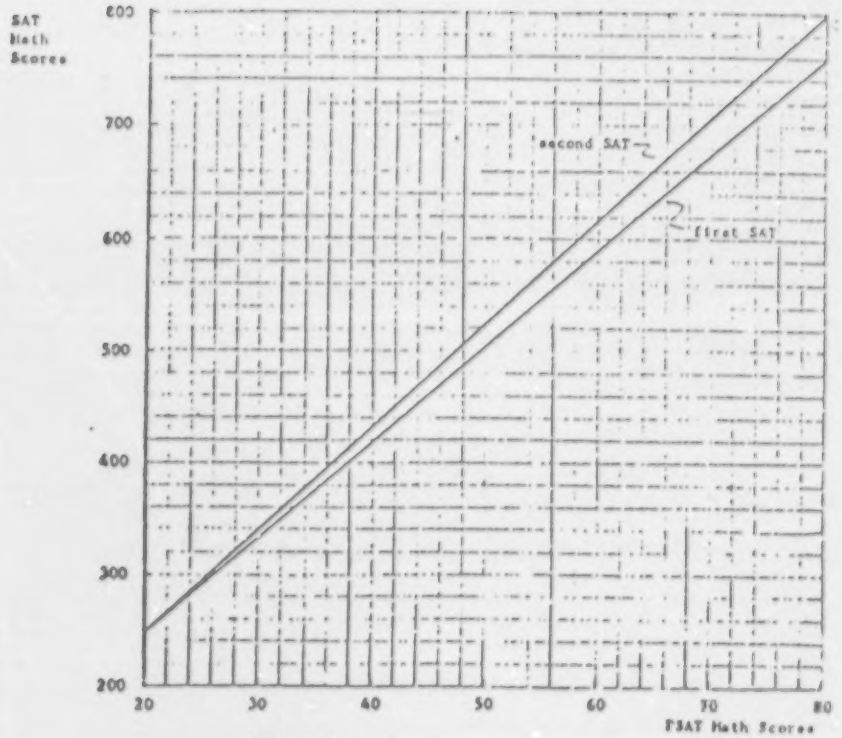
PSAT and first-SAT math scores
for uncoached 2-time takers of SAT



PSAT and second-SAT math scores
for uncoached 2-time takers of SAT



SAT average verbal scores as a function of PSAT verbal scores for uncoached 2-time takers



SAT average math scores as a function of PSAT math scores for uncoached 2-time takers

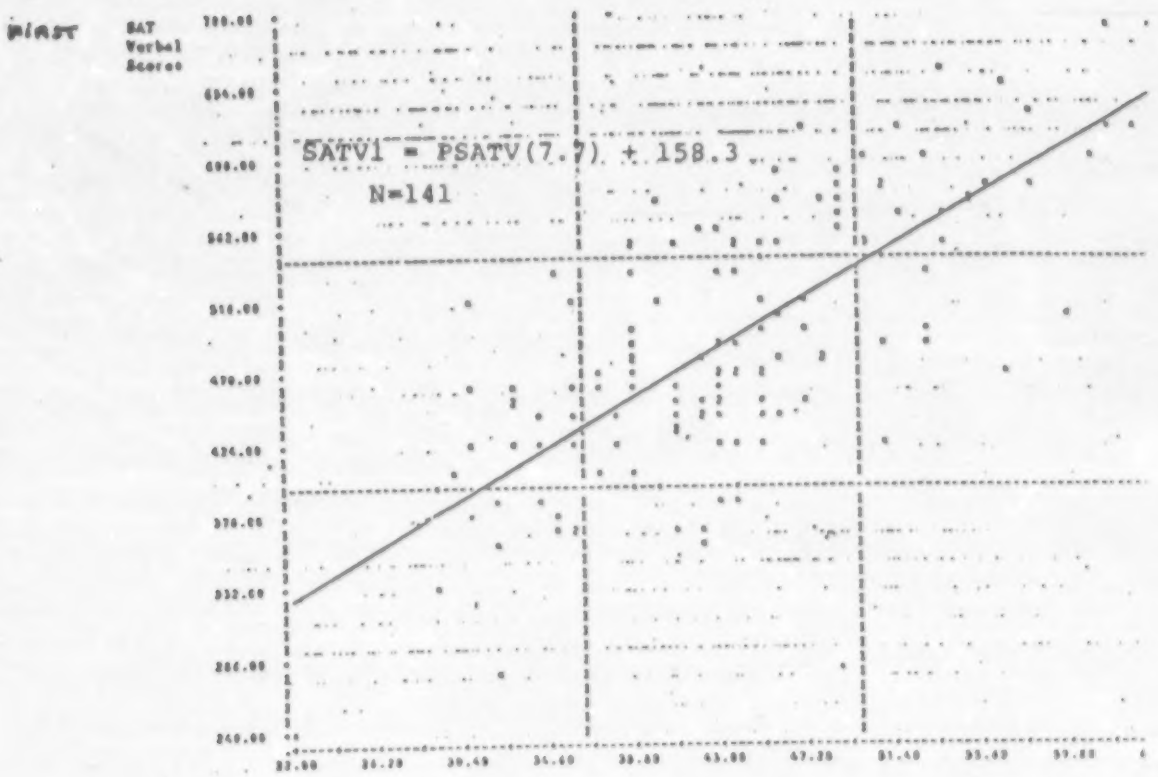
88

(3) SAT verbal scores for 2-time takers coached before first exam

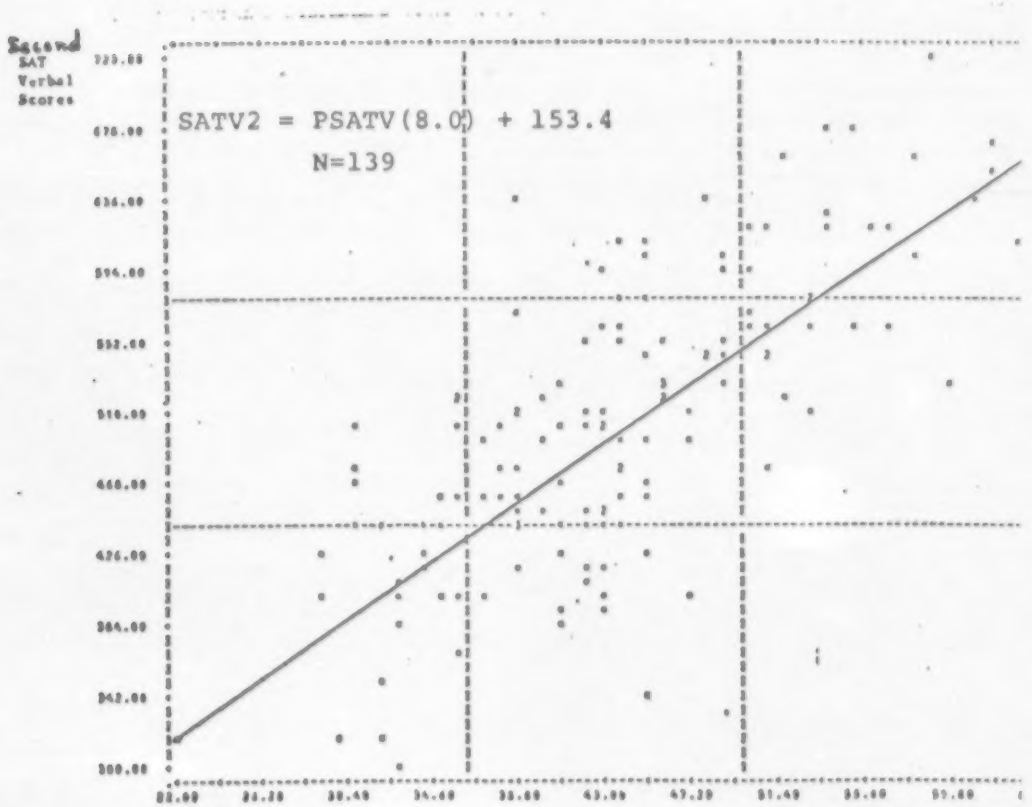
Actual SAT verbal scores for 2-time takers coached before their first exam appear on pages 75 and 76. The first page displays first-SAT and second-SAT verbal scores for students coached by SHK (001A). The second page shows first-SAT and second-SAT verbal scores for students coached at Test Prep Centers (022).

Pages 77 and 78 compare average verbal SAT scores for coached and uncoached students. The comparisons suggest that SHK (001A) is clearly effective for all students and that Test Prep Centers (022) is effective for low-PSAT students, but possibly counterproductive for high-PSAT students; however, Test Prep Centers' (022) high-PSAT students do recover much of their lost ground on their second SAT attempt.

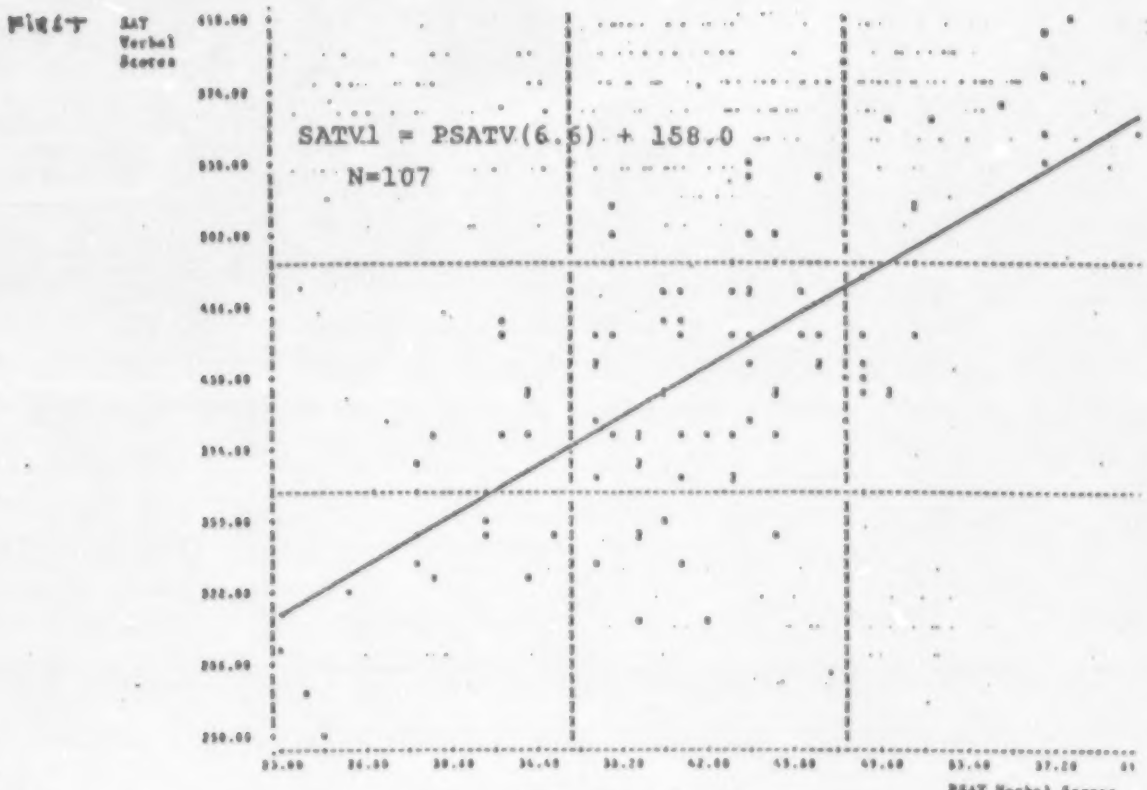
SHK (001A) students show average verbal conditional SAT score increases above a matched control group ranging from 56.7 to 32.7 points from low to the high PSAT scores. Test Prep Centers' (022) students reflect gains of 34.4 SAT verbal points at the low end of the PSAT range but losses of 55.6 SAT verbal points at the high end of the PSAT verbal range. The second SAT verbal score for Test Prep Centers (022) reflects losses of 22.8 SAT verbal points at the high end of the PSAT scale compared to the matched control group.



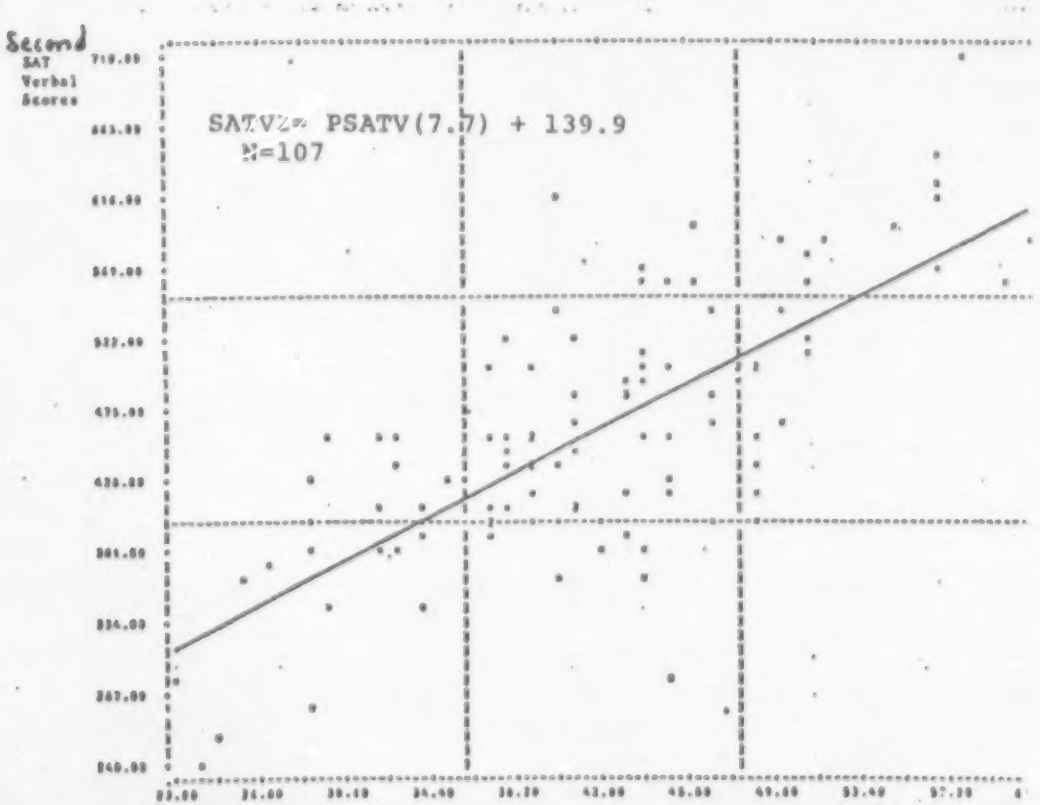
PSAT verbal and first-SAT verbal scores for 2-time takers coached at UCLA before their first SAT



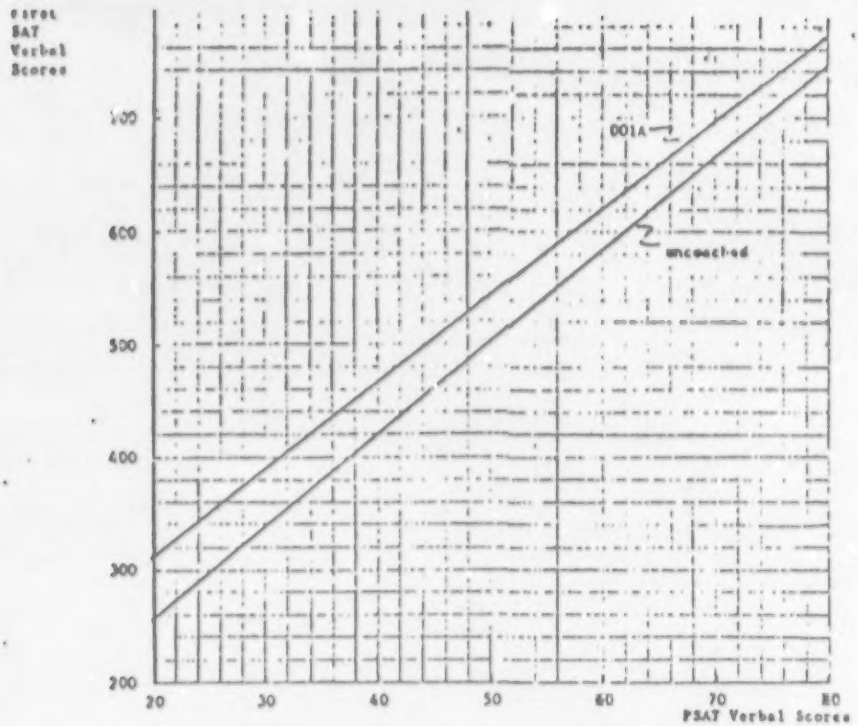
PSAT verbal and second-SAT verbal scores for 2-time takers coached at UCLA before their first SAT



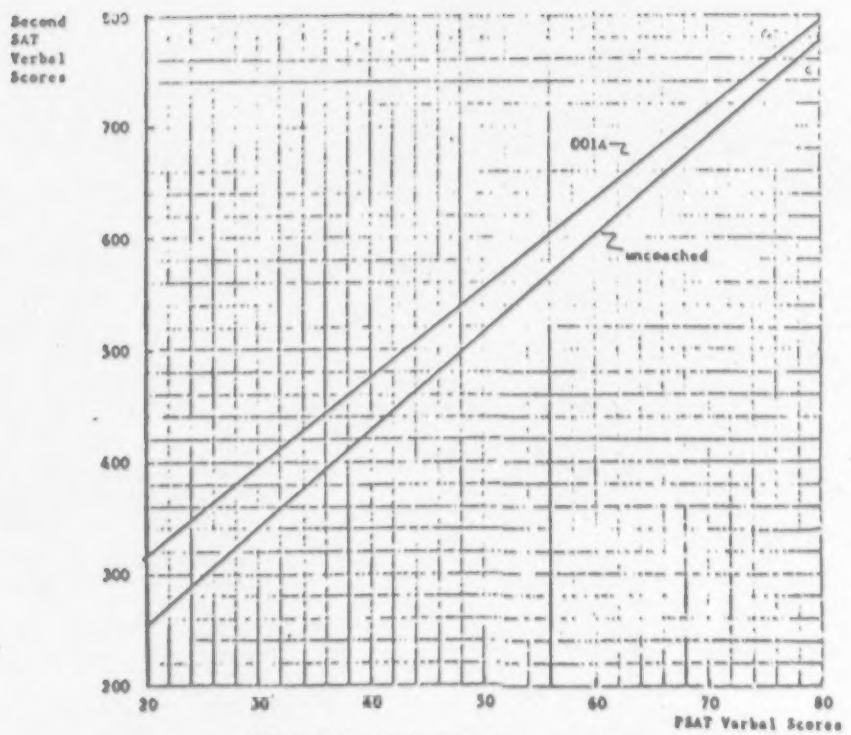
PSAT verbal and first-SAT verbal scores for 2-time takers coached at 022 before their first SAT



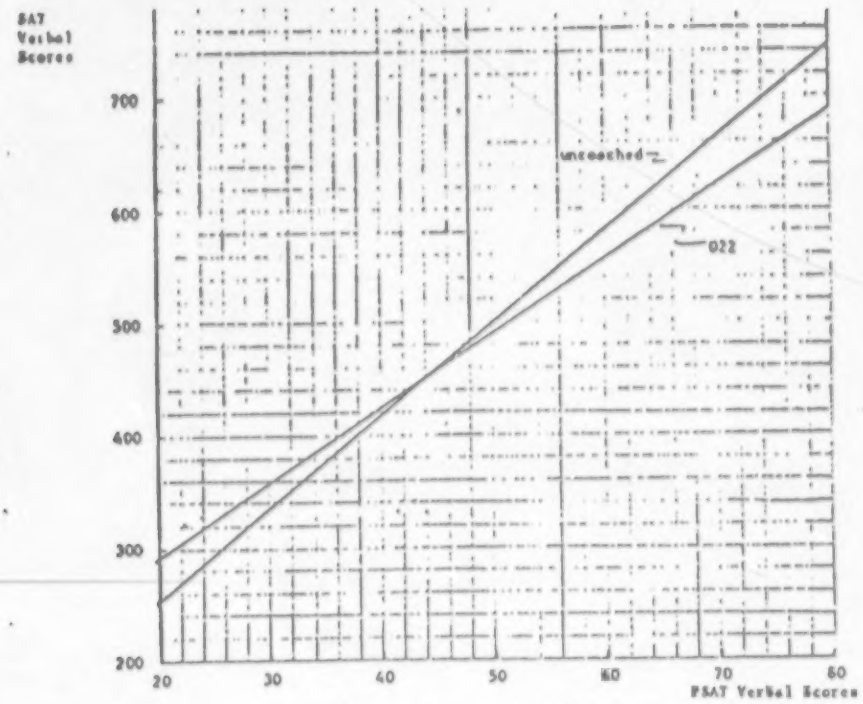
PSAT verbal and second-SAT verbal scores for 2-time takers coached at 022 before their first SAT



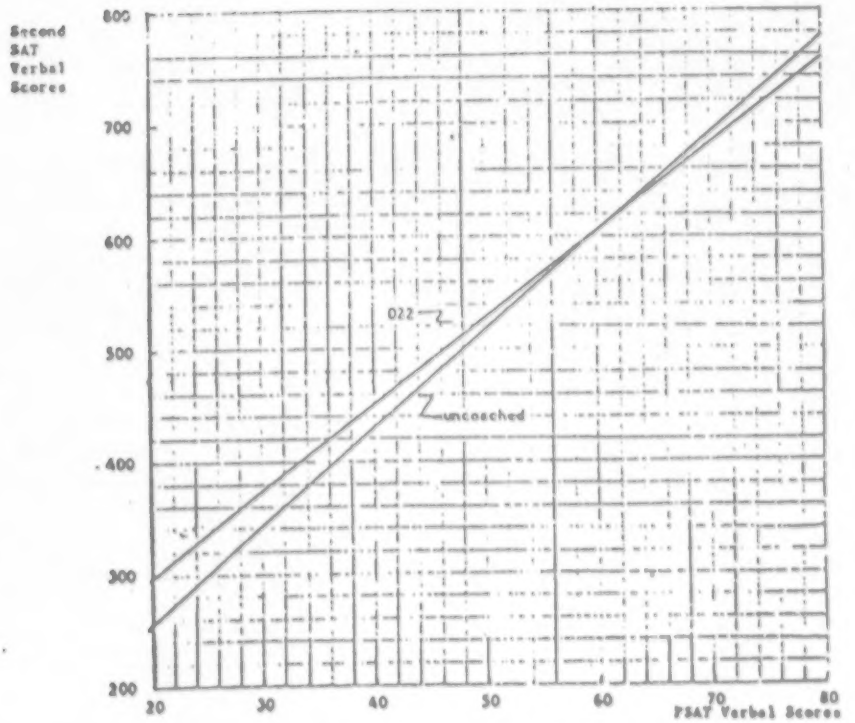
SAT average verbal scores for first-SAT as a function of PSAT verbal scores, comparing 2-time takers coached before their first SAT at 001A against uncoached 2-time takers



SAT average verbal scores for second-SAT as a function of PSAT verbal scores, comparing 2-time takers coached at 001A before their first SAT with uncoached 2-time takers



SAT average verbal scores for first-SAT as a function of PSAT verbal scores, comparing 2-time takers coached at 022 before their first SAT with uncoached 2-time takers



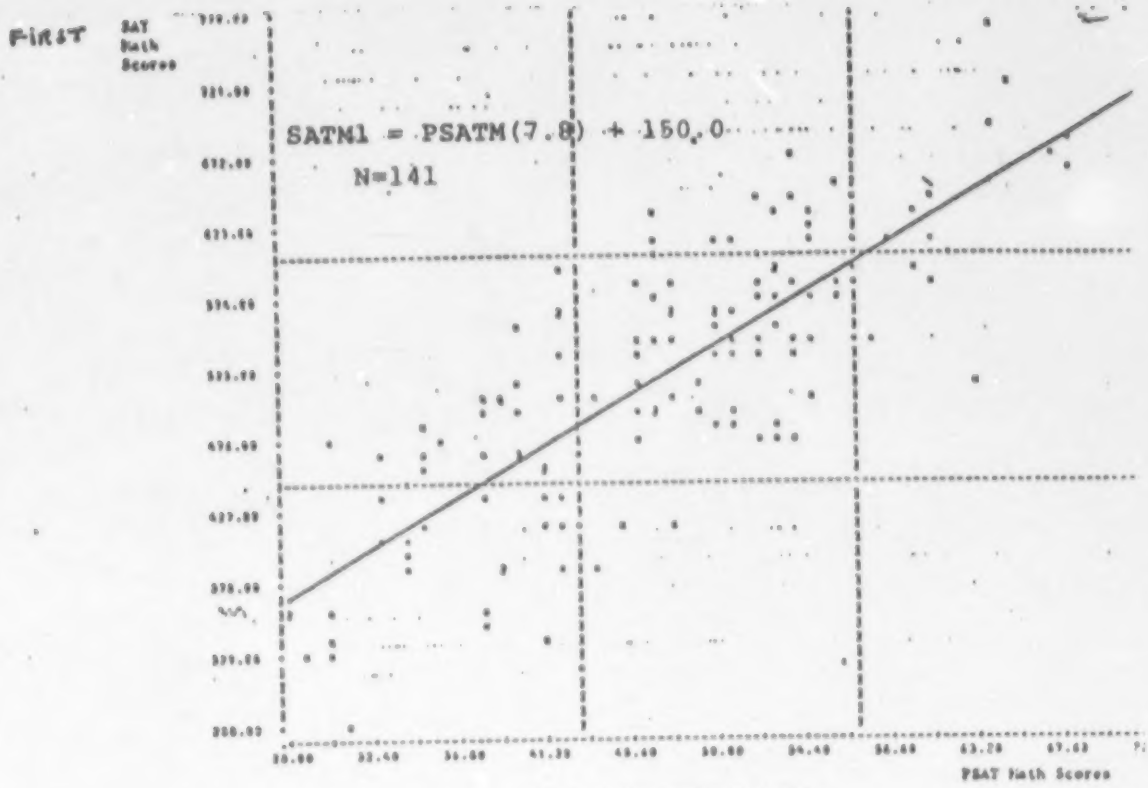
SAT average verbal scores for second-SAT as a function of PSAT verbal scores, comparing 2-time takers coached at 022 before their first SAT with uncoached 2-time takers

(4) SAT math scores for 2-time takers coached before first exam

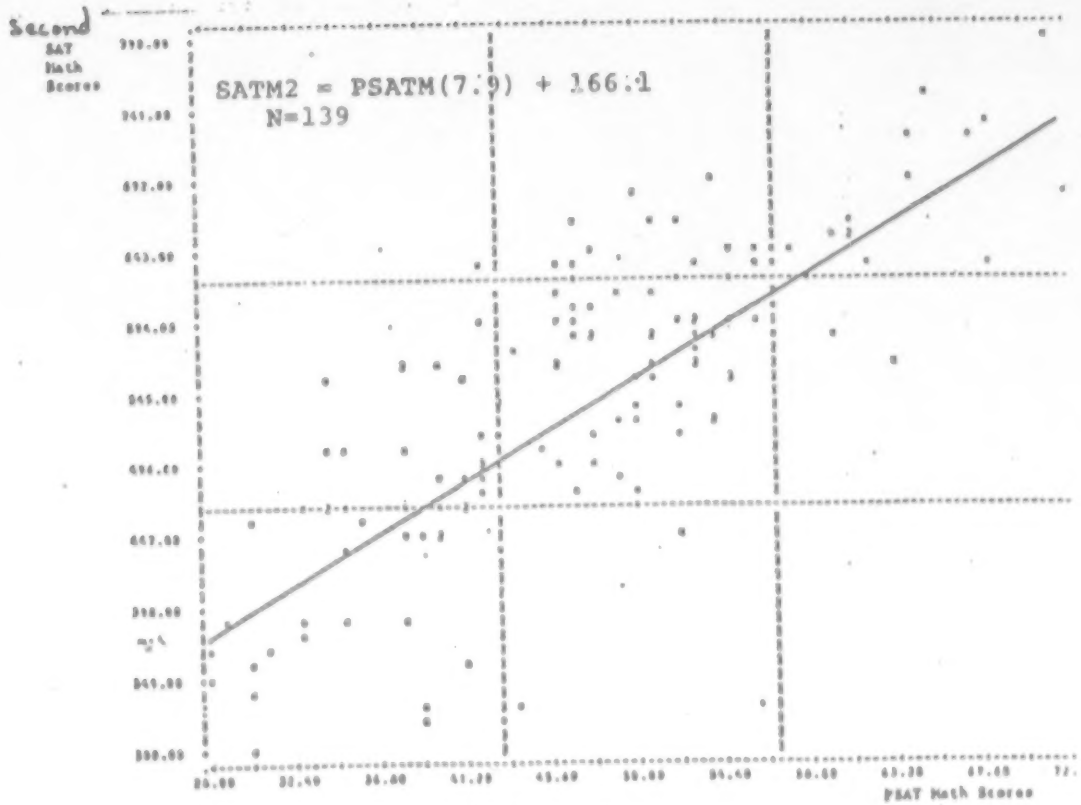
Actual SAT math scores for 2-time takers coached before their first exam appear on pages 80 and 81. The first page displays first-SAT and second-SAT math scores for students coached by SHK (001A). The second page displays first-SAT and second-SAT math scores for students coached at Test Prep Centers (022).

Pages 82 and 83 compare average math SAT scores for coached students against uncoached students. These comparisons suggest that SHK (001A) coaches effectively for 2-time takers, with the greatest benefit going to low-PSAT students. SAT average score advantages range from 57 points for low-PSAT students to 16 points for high-PSAT students. Comparing second-SAT scores reveals an average difference of 74 points for low-PSAT students and practically no difference for high-PSAT students.

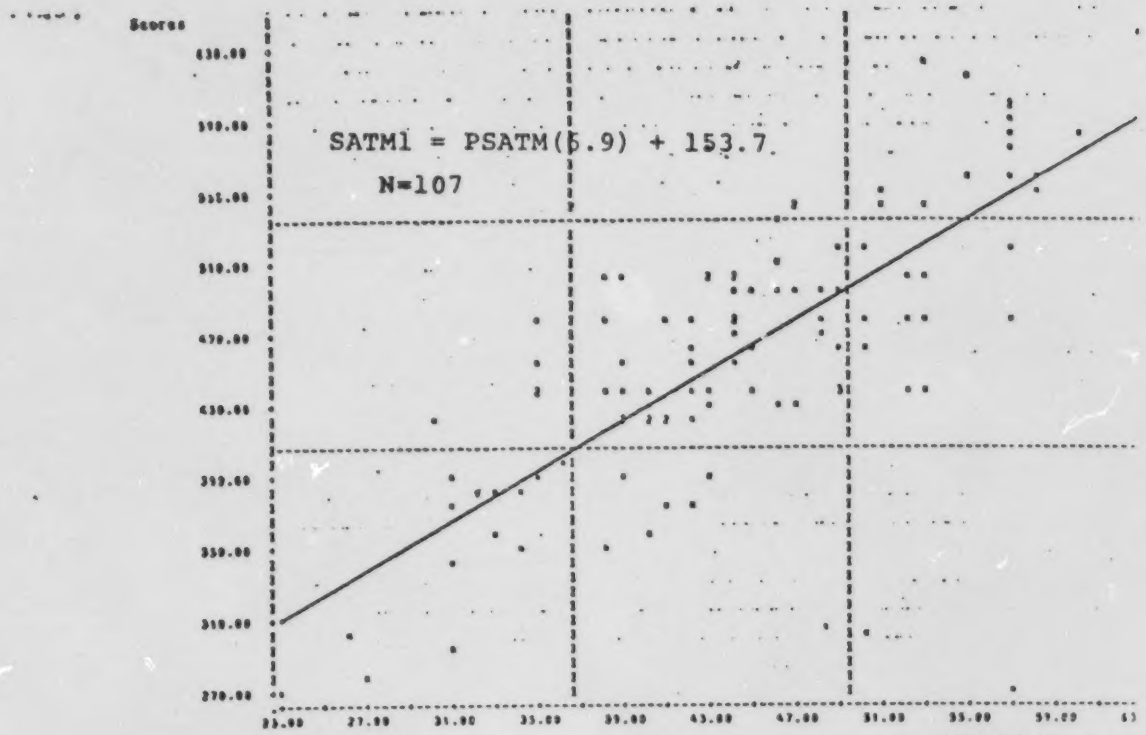
Test Prep Centers (022) also appears to offer initial coaching benefits favoring low-PSAT students. This school's higher-PSAT students make considerably greater improvements than uncoached students on their second SAT. Test Prep Centers' students show improvements of 42 SAT math points at the low end of the PSAT range and decreases of 54 SAT math points at the high end of the PSAT scores. However their second SAT math scores increase 77.6 points from their first SAT math score at a high end of the PSAT range compared to an increase of 36.6 SAT math points for the control group.



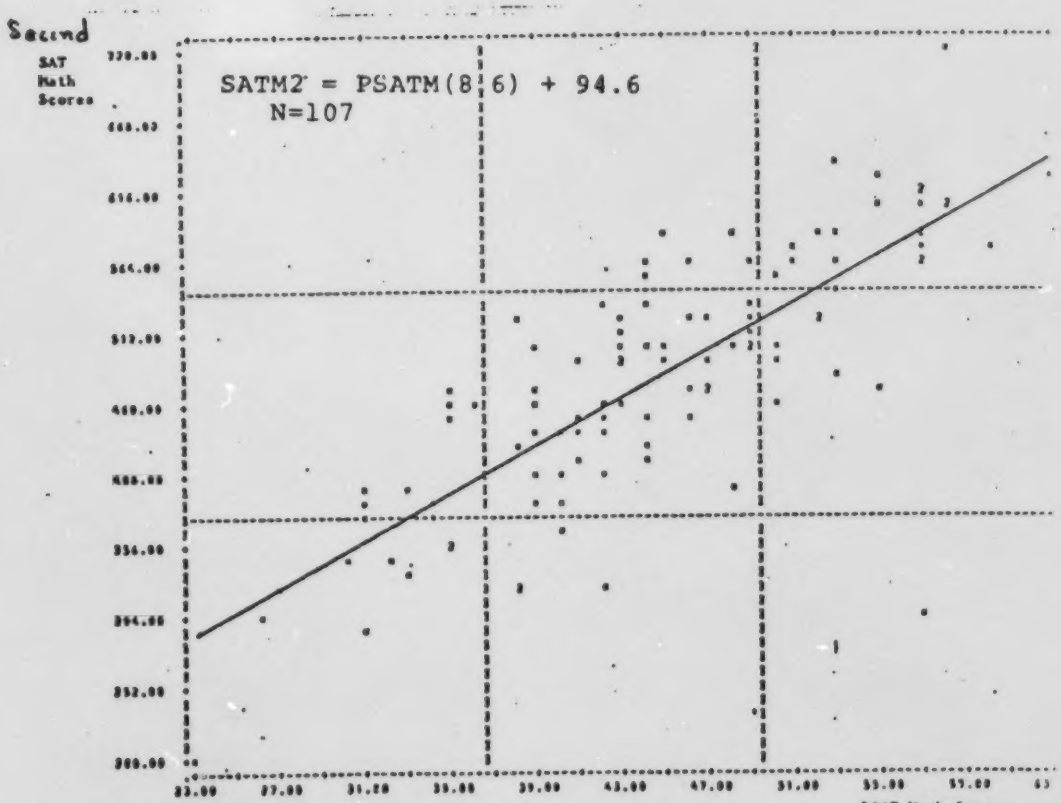
PSAT and first-SAT math scores
for 2-time takers coached at UCLA
before their first SAT



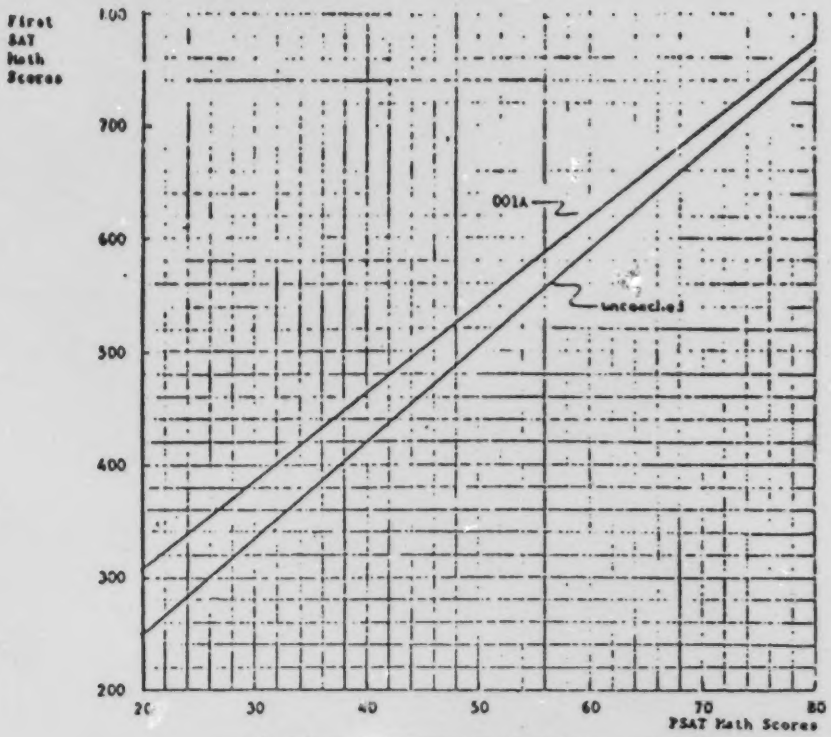
PSAT and second-SAT math scores
for 2-time takers coached at UCLA
before their first SAT



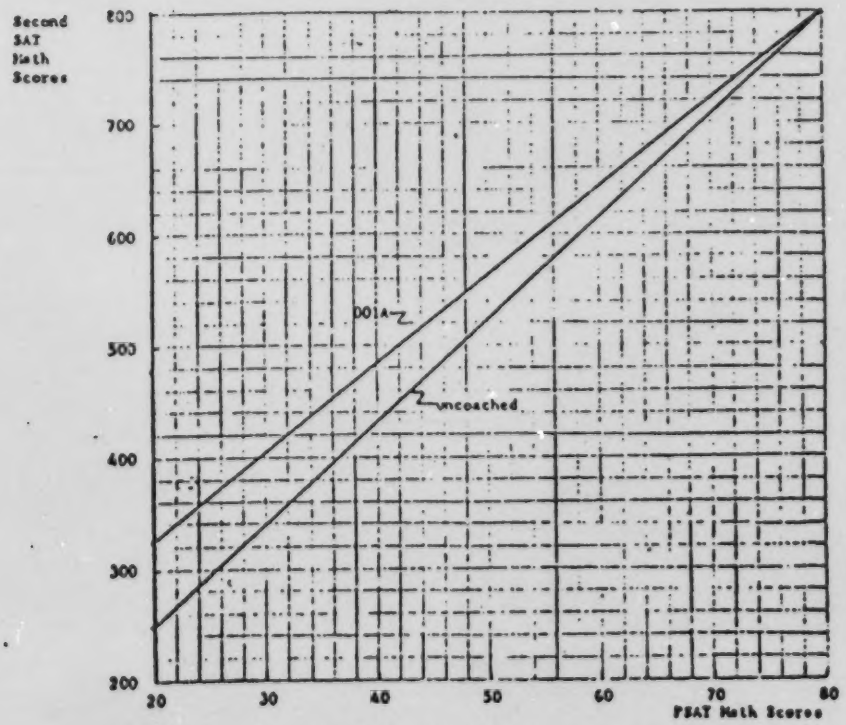
PSAT and first-SAT math scores
for 2-time takers coached at 022
before their first SAT



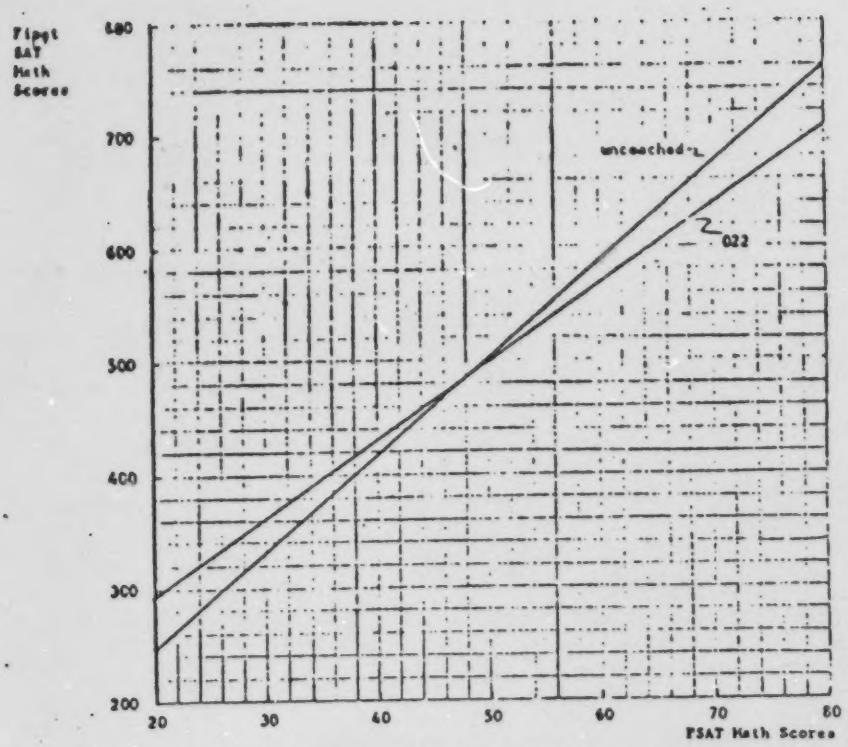
PSAT and second-SAT math scores
for 2-time takers coached at 022
before their first SAT



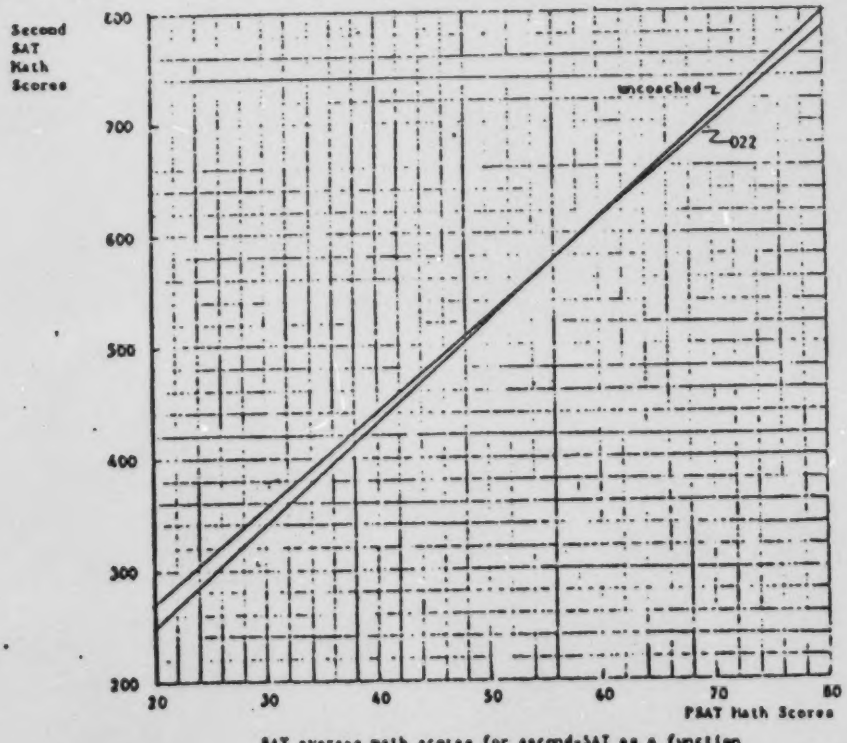
SAT average math scores for first-SAT as a function of PSAT math scores, comparing 2-time takers coached at 001A before their first SAT against uncoached 2-time takers



SAT average math scores for second-SAT as a function of PSAT math scores, comparing 2-time takers coached at 001A before their first SAT against uncoached 2-time takers



SAT average math scores for first-SAT as a function of PSAT math scores, comparing 2-time takers coached at 022 before their first SAT with uncoached 2-time takers



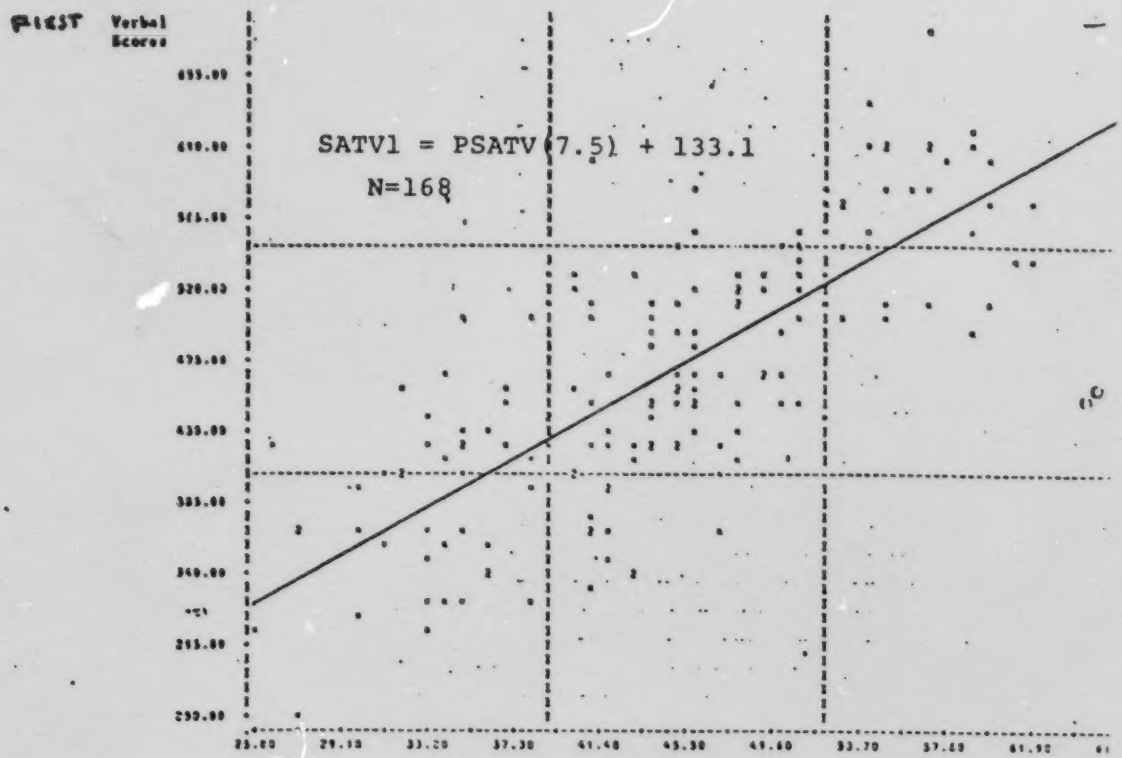
SAT average math scores for second-SAT as a function of PSAT math scores, comparing 2-time takers coached at 022 before their first SAT with uncoached 2-time takers

(5) SAT verbal scores for 2-time takers coached between exams

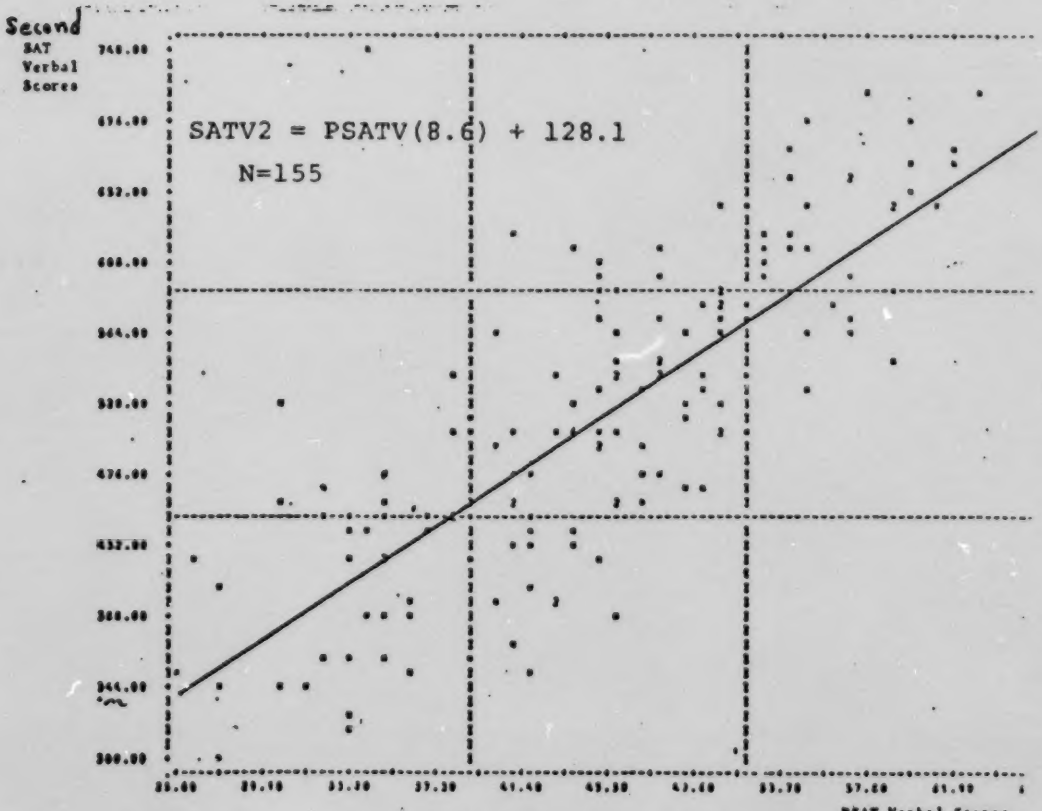
Actual SAT verbal scores for 2-time takers coached between exams appear on pages 85 and 86. The first page displays first-SAT and second-SAT scores for students coached at SHK (001A). The second page displays first-SAT and second-SAT scores for students coached at Test Prep Centers (022).

Pages 87 and 88 compare verbal SAT scores for coached and uncoached students. These comparisons suggest that SHK (001A) is effective although Test Prep Centers (022) offers minimal benefits.

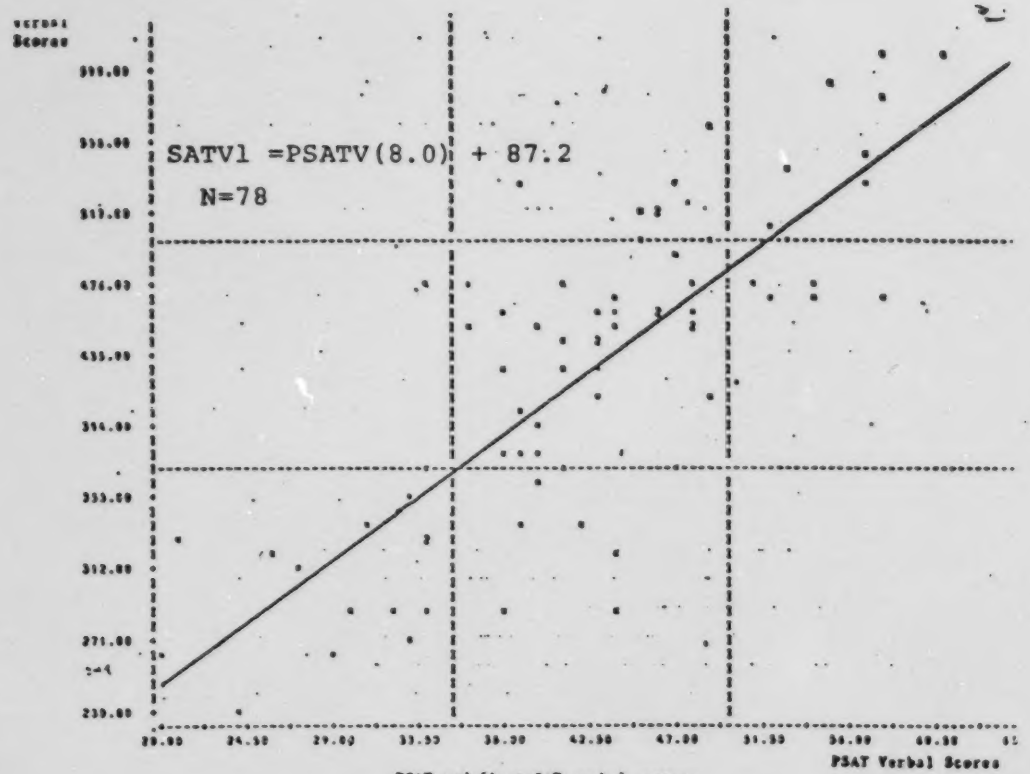
SHK (001A) shows a fairly constant increase over the entire PSAT range with average conditional SAT second verbal scores increasing from 43 to 39 points. Test Prep Centers (022) shows increases of 1 to 7 average conditional verbal points over the entire PSAT range.



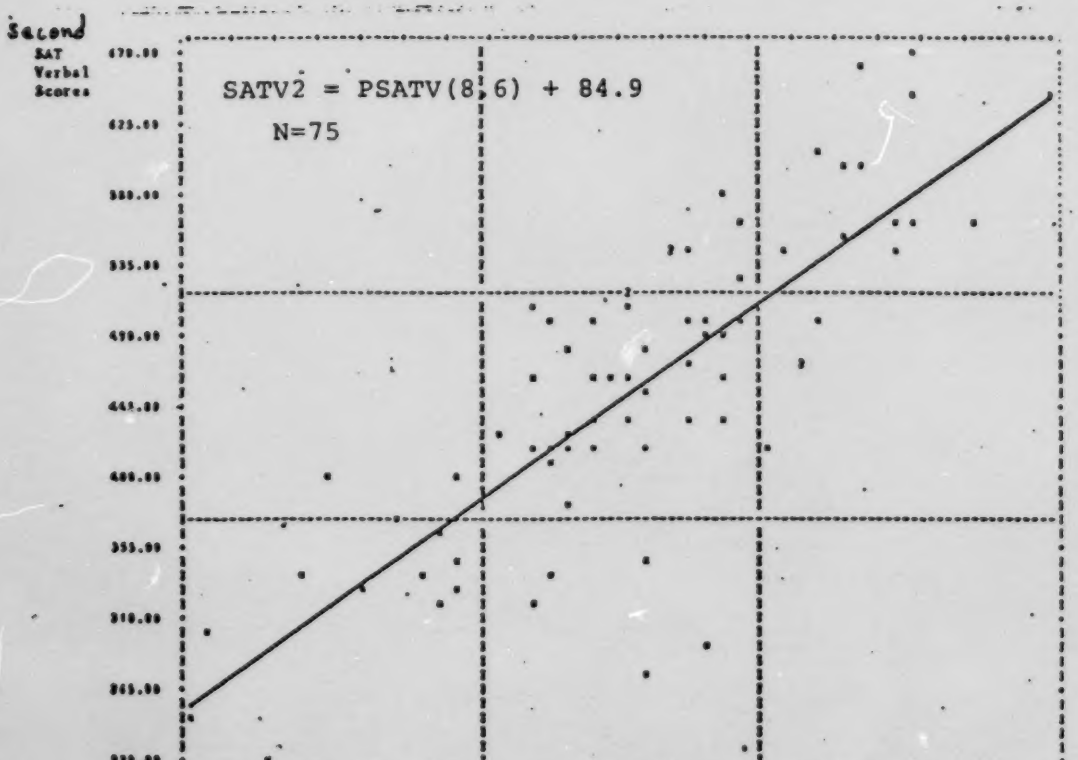
PSAT and first-SAT verbal scores for 2-time takers coached at 001A between SAT exams



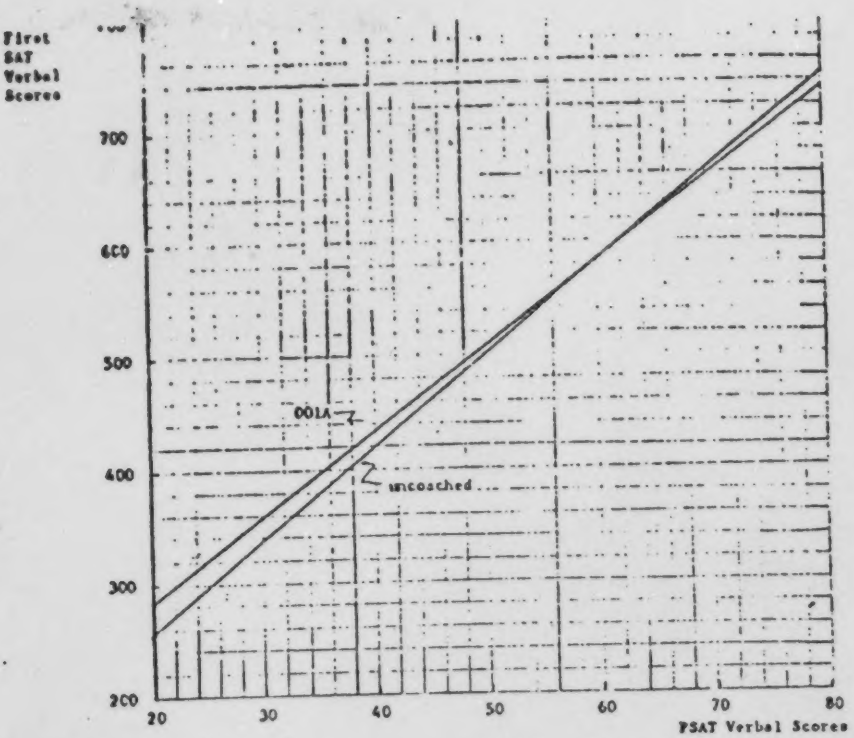
PSAT and second-SAT verbal scores for 2-time takers coached at 001A between SAT exams



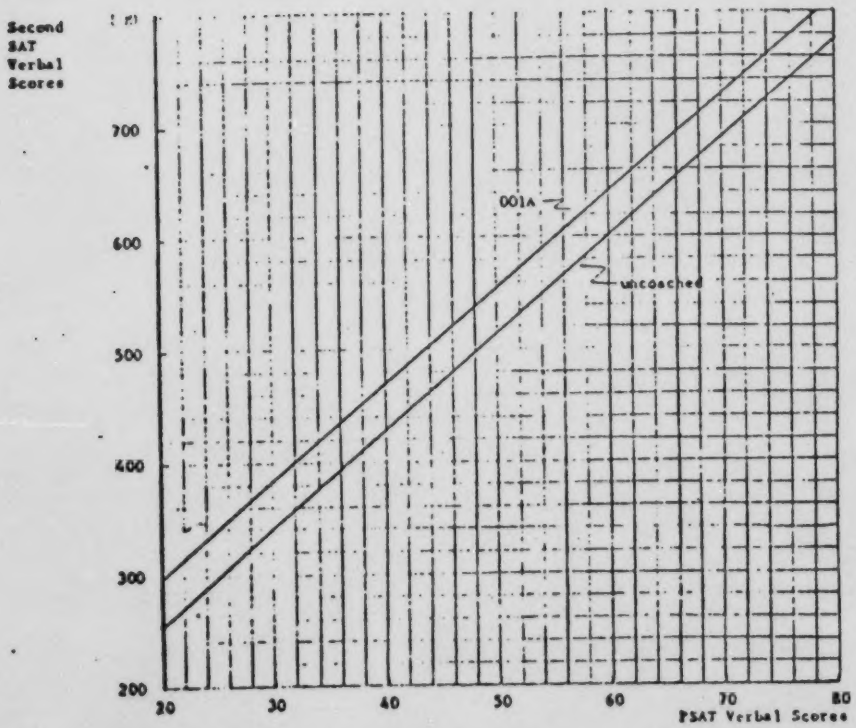
PSAT and first-SAT verbal scores
for 2-time takers coached at 022
between SAT exams



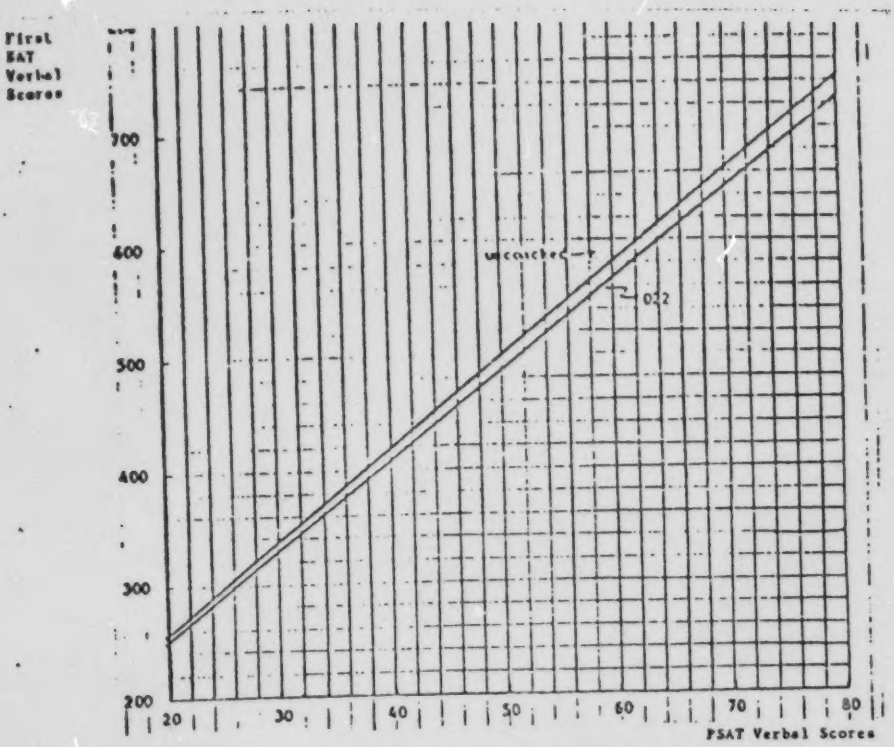
PSAT and second-SAT verbal scores
for 2-time takers coached at 022
between SAT exams



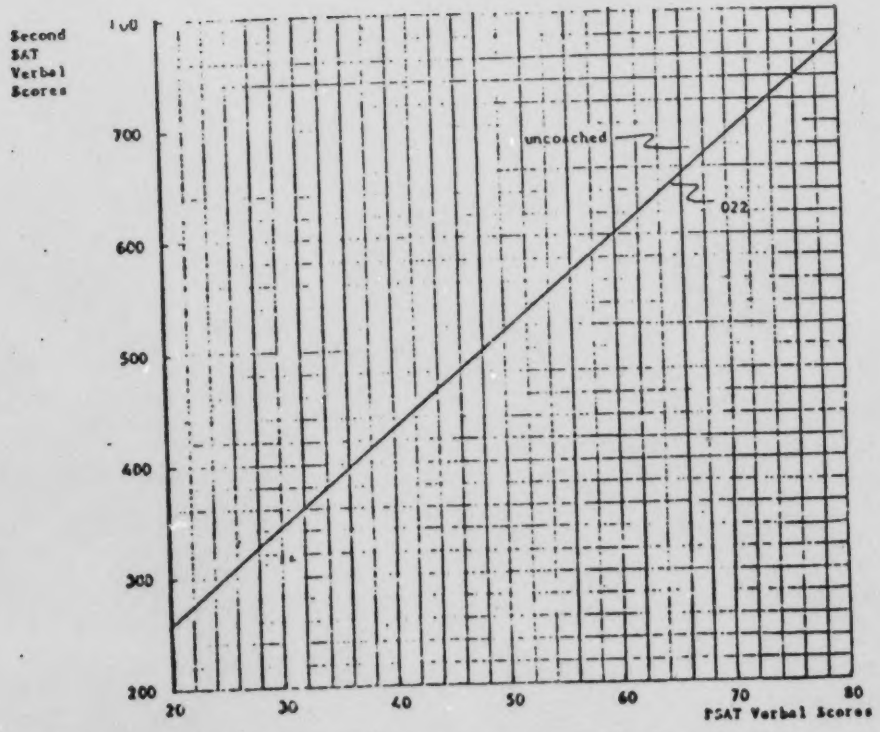
SAT average verbal scores for first-SAT as a function of PSAT verbal scores, comparing 2-time takers coached at 001A between SAT exams with uncoached 2-time takers



SAT average verbal scores for second-SAT as a function of PSAT verbal scores, comparing 2-time takers coached at 001A between SAT exams with uncoached 2-time takers



SAT average verbal scores for first-SAT as a function of PSAT verbal scores, comparing 2-time takers coached at 022 between SAT exams with uncoached 2-time takers



SAT average verbal scores for second-SAT as a function of PSAT verbal scores, comparing 2-time takers coached at 022 between SAT exams with uncoached 2-time takers

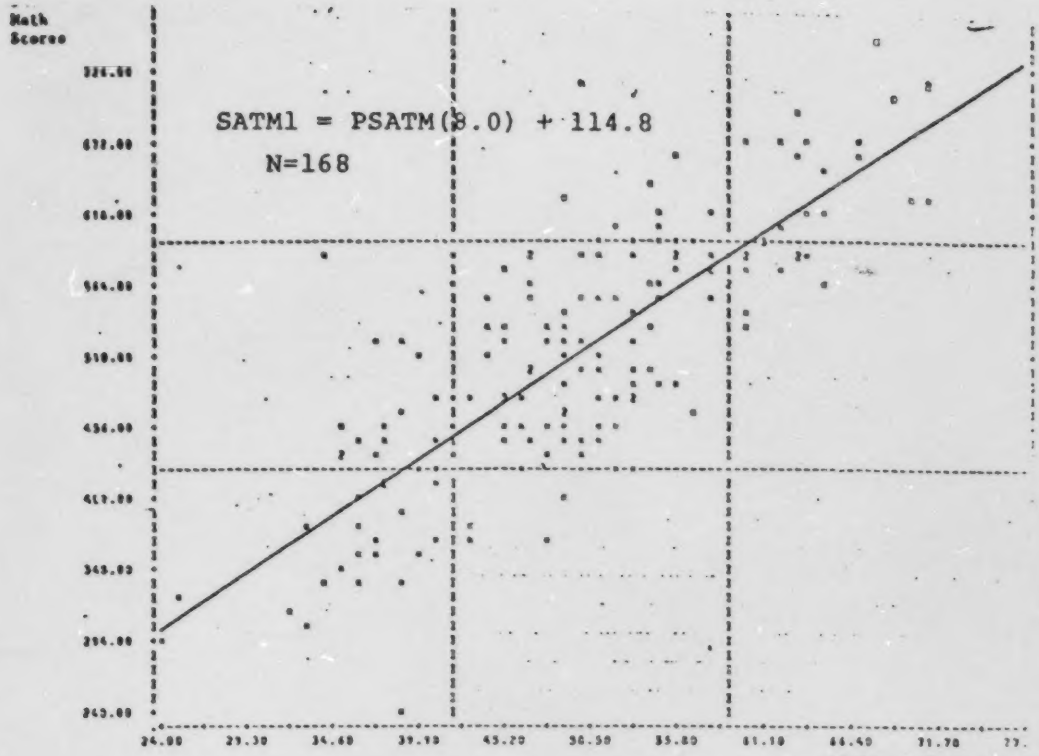
(6) SAT math scores for 2-time takers coached between exams

Actual SAT math scores for 2-time takers coached between exams appear on pages 91 and 92. Page 91 displays first-SAT and second-SAT scores for 2-time takers coached at SHK (001A). Page 92 shows first-SAT and second-SAT scores for 2-time takers coached at Test Prep Centers (022).

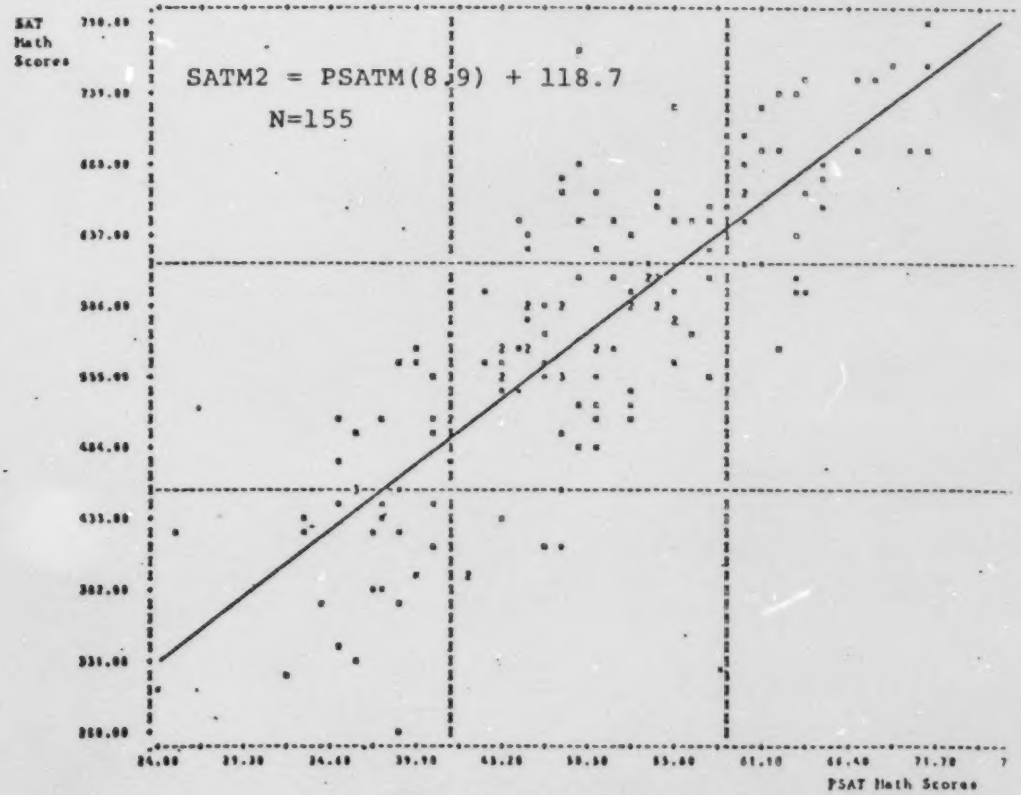
Pages 93 and 94 compare average math SAT scores for coached and uncoached students. As was the case with verbal SAT, these comparisons suggest that both coaching schools are effective, and that SHK (001A) is the more effective of the two schools. SHK (001A) shows second average conditional math increases between 22 to 76 points from the low to the high range of PSAT scores whereas the control group shows increases of 1 to 35 points. SHK therefore shows a net benefit for second-SAT math scores of between 21 and 41 points.

Comparing results for those who were coached before their first SAT and those who were coached between exams suggests that coaching and SAT experience confer slightly different benefits. Coaching without SAT experience appears to help low-PSAT students. Exam experience with or without coaching appears to help high-PSAT students, and coaching after an exam appears to help everyone. Possibly, this may mean that commercial coaching tends to stress basic skills and remedial learning, while not emphasizing the more difficult portions

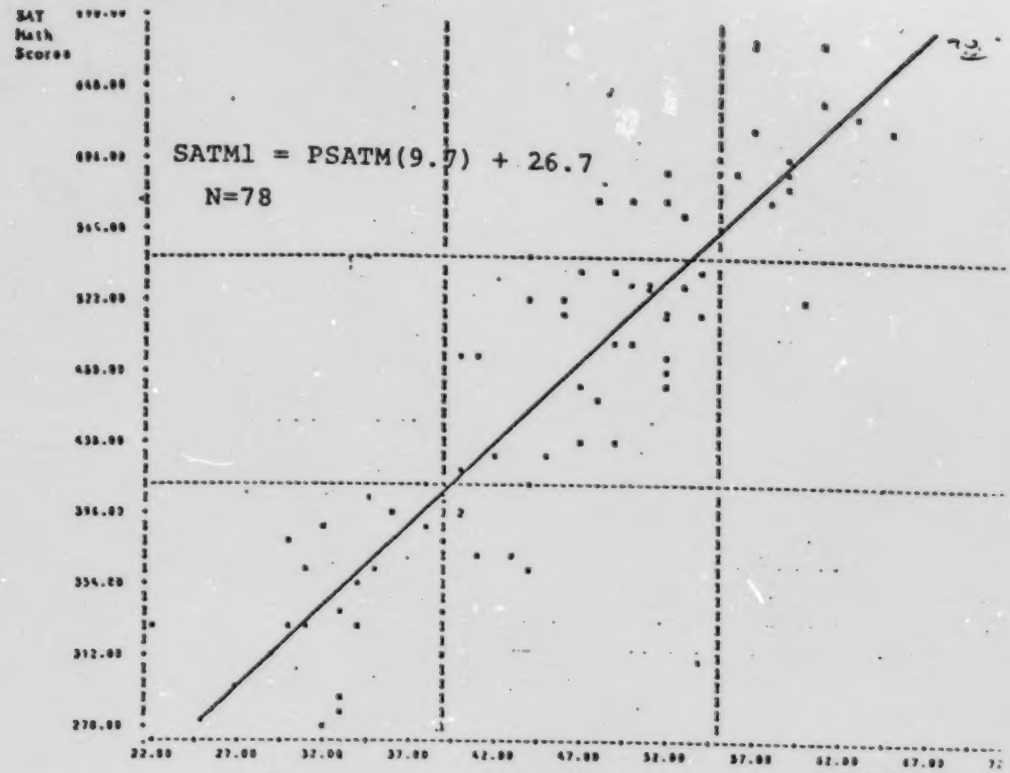
of the SAT; however, high-scoring coached students with prior SAT experience may be able to integrate their coaching lessons with the requirements of the more difficult parts of the SAT.



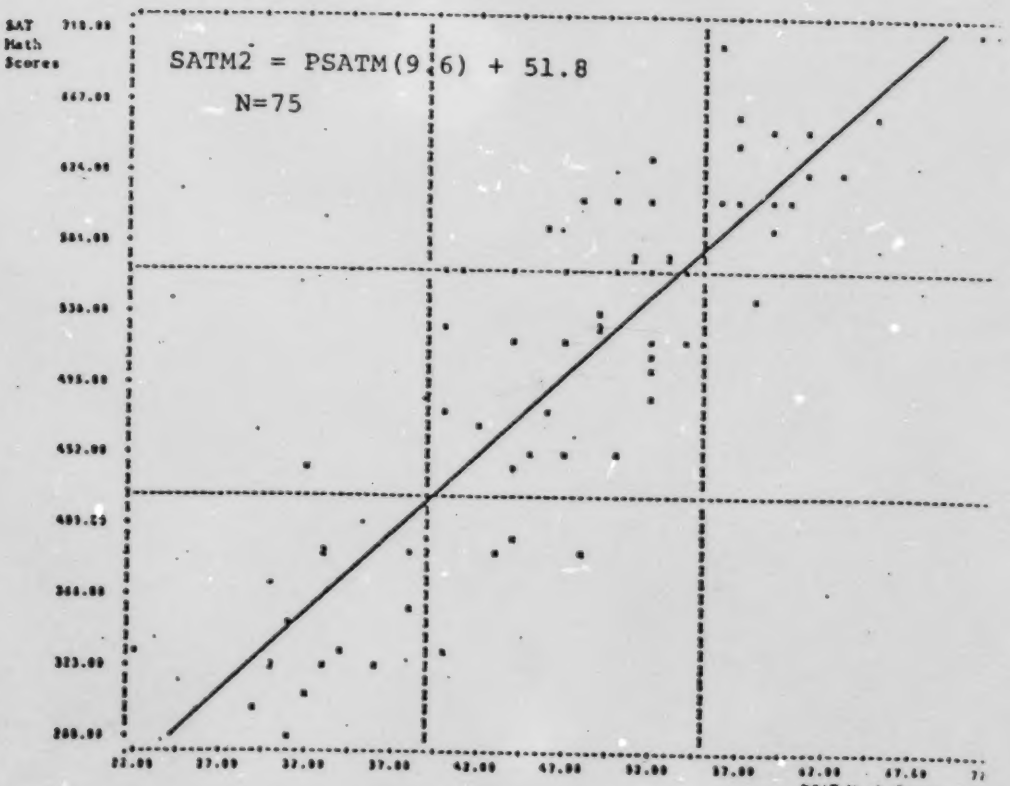
PSAT and first-SAT math scores
for 2-time takers coached at OOIA
between SAT exams



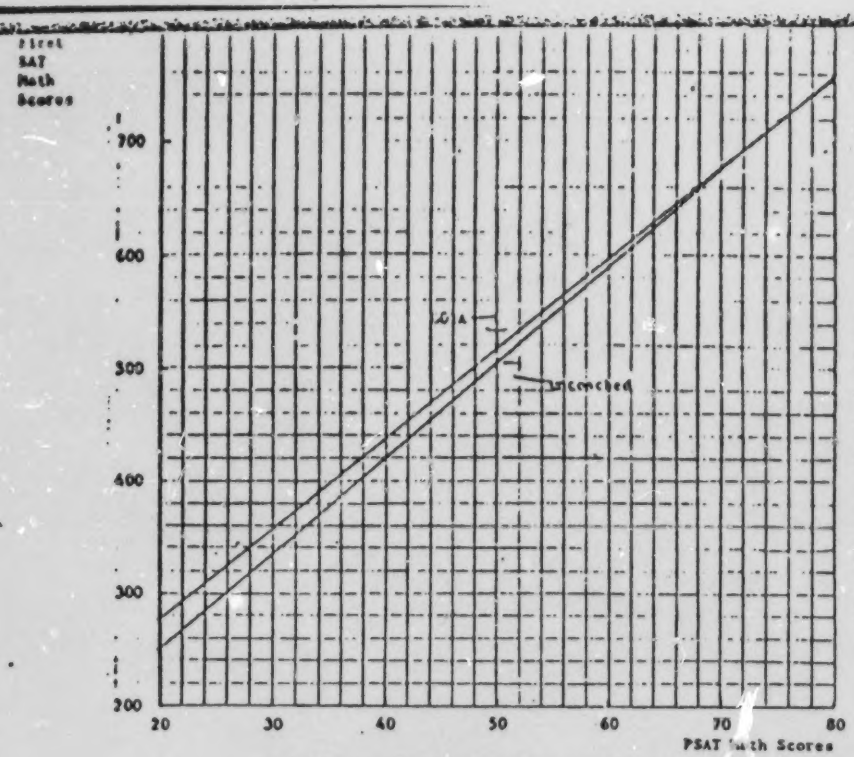
PSAT and second-SAT math scores
for 2-time takers coached at OOIA
between SAT exams



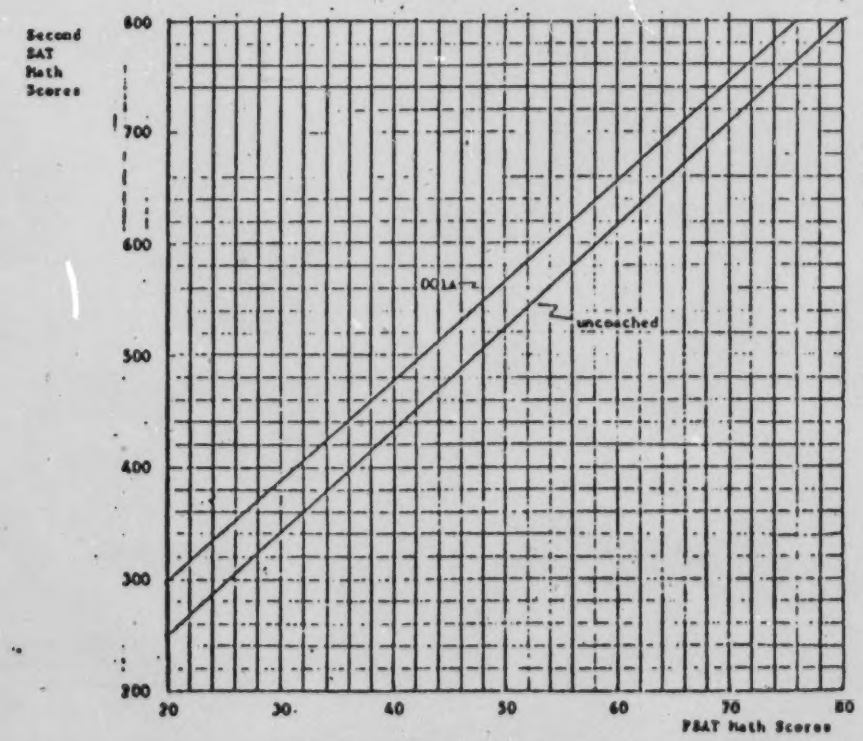
PSAT and first-SAT math scores
for 2-time takers coached at 022
between SAT exams



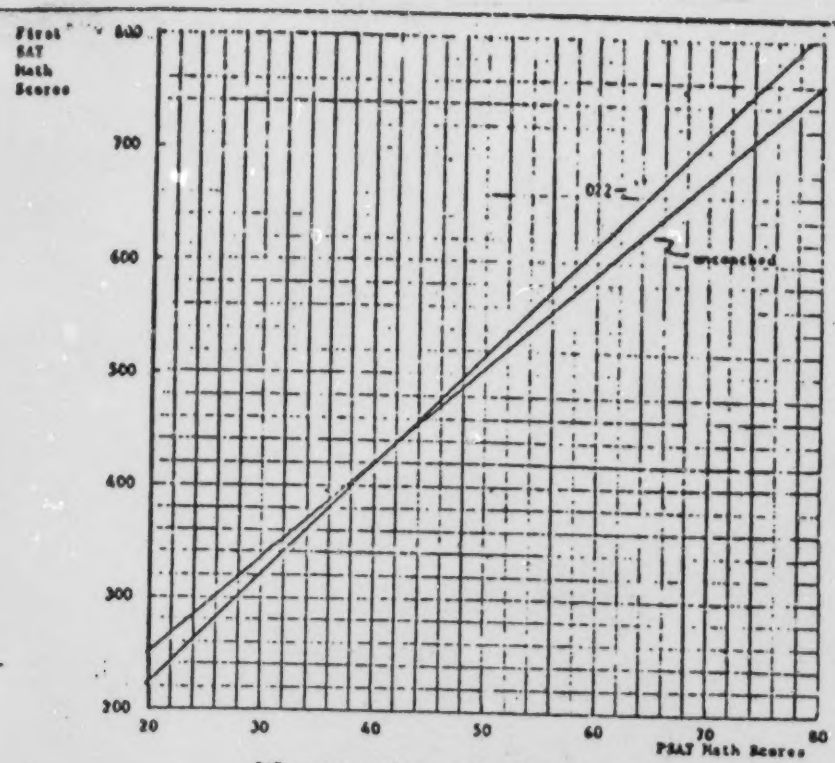
PSAT and second-SAT math scores
for 2-time takers coached at 022
between SAT exams



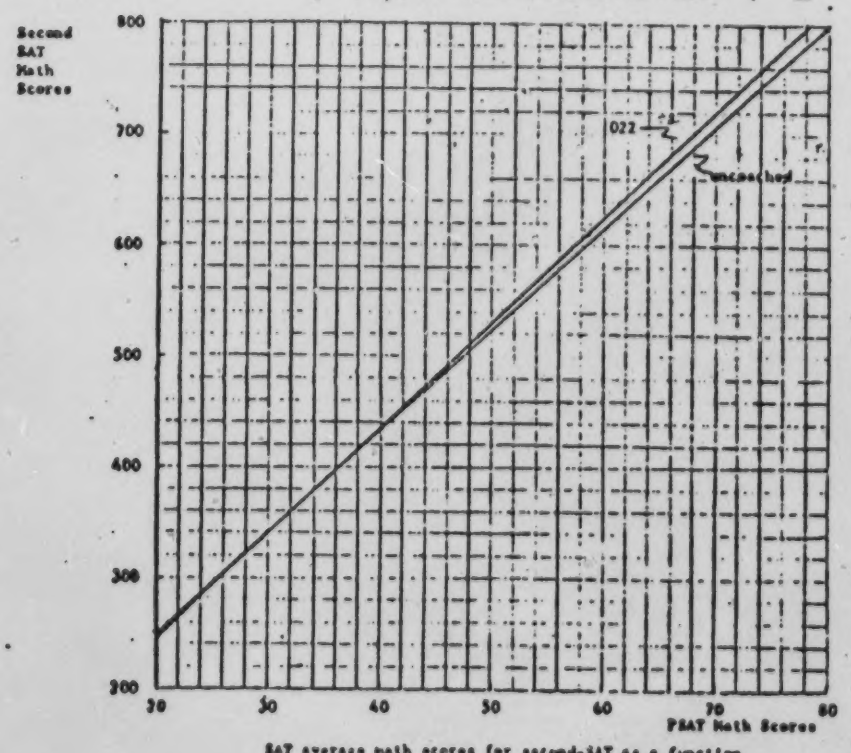
SAT average math scores for first-SAT as a function of PSAT math scores, comparing 2-time takers coached between SAT exams with uncoached 2-time takers



SAT average math scores for second-SAT as a function of PSAT math scores, comparing 2-time takers coached at CCIA between SAT exams with uncoached 2-time takers



SAT average math scores for first-SAT as a function of PSAT math scores, comparing 2-time takers coached at 022 between SAT exams with uncoached 2-time takers



SAT average math scores for second-SAT as a function of PSAT math scores, comparing 2-time takers coached at 022 between SAT exams with uncoached 2-time takers

(7) SAT 2-time takers coached between exams

This final section of SAT results displays and compares second-SAT scores as a function of first-SAT scores. Actual first-SAT and second-SAT scores appear on pages 97-99. Page 97 displays verbal and math scores for uncoached 2-time takers. Page 98 displays scores for students coached at SHK (001A). Page 99 displays scores for students coached at Test Prep Centers (022).

Pages 100 and 101 compare coached and uncoached students. Each diagram in this comparison contains a "breakeven line" representing no change between first and second SAT exams. In effect, for this set of diagrams, the study baseline has shifted forward from PSAT to first-SAT. Once again SHK (001A) is clearly effective, although the case for Test Prep Centers (022) seems somewhat marginal.

Using the first SAT score as the independent variable the following results can be shown:

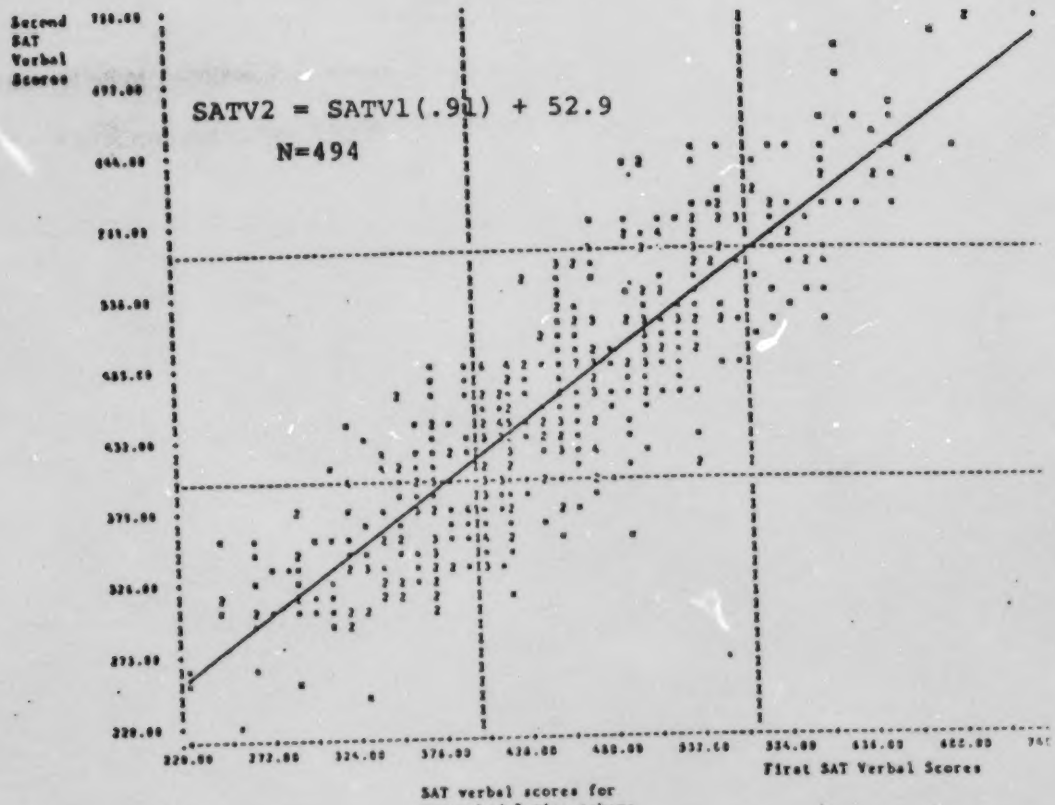
(a) SHK (001A) students' second average SAT verbal scores increase from 42 to 24 points from the low to the high range of first SAT verbal scores above the control group;

(b) SHK (001A) students' second average math scores increase from 20 to 44 points from the low to high range of first SAT math scores above the control group;

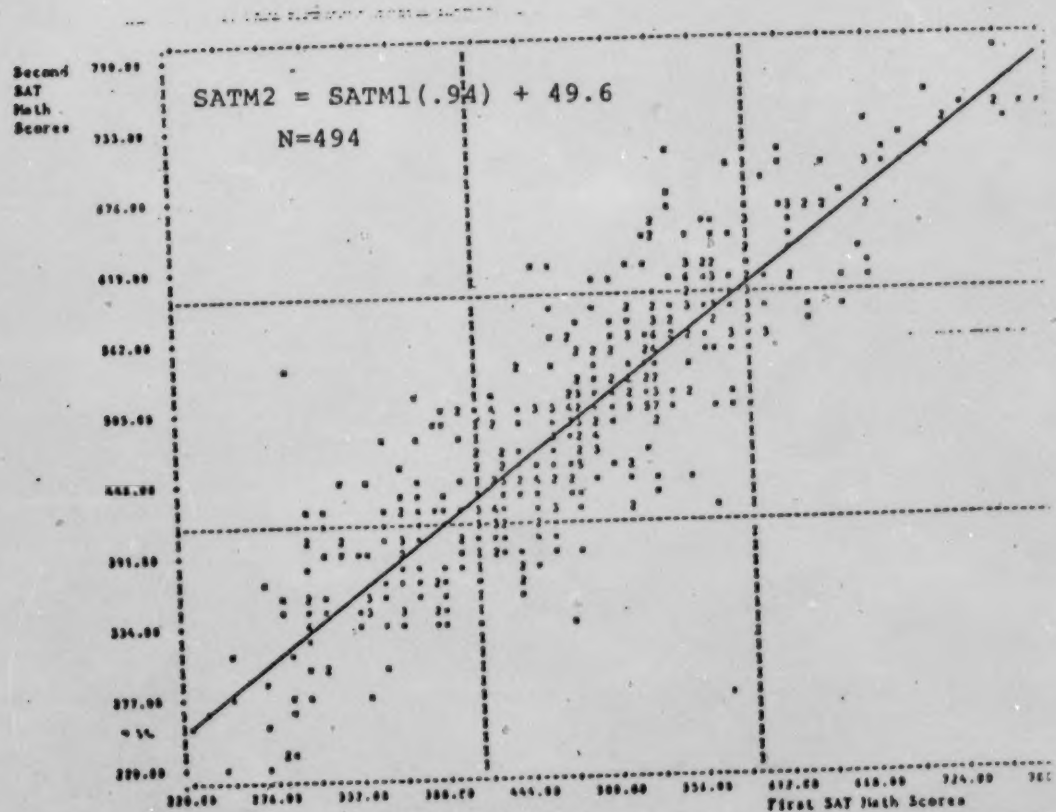
(c) Test Prep Centers' students (022) show second verbal SAT scores changing from -3 to +15 points compared to the control group from low to high first-SAT verbal scores; and

(d) Test Prep Centers' students (022) show second average math SAT scores changing from +7.1 to -5.4 points compared to the control group, from the low end to high end of the first-SAT math score range.

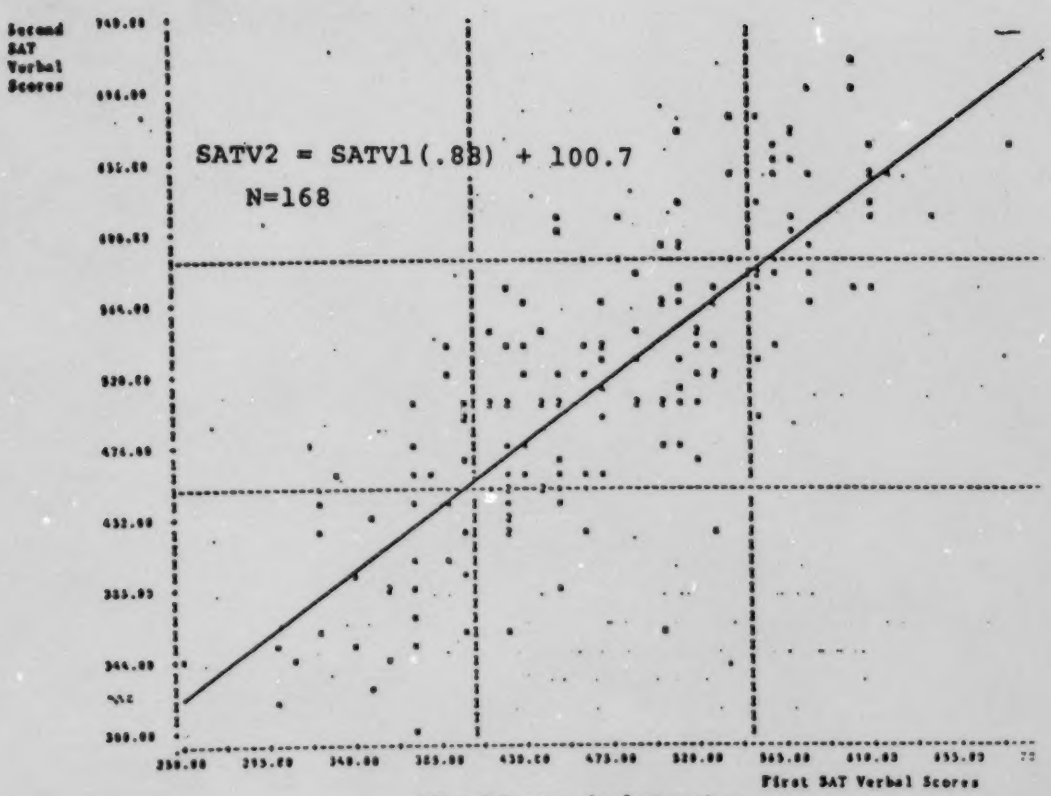
111



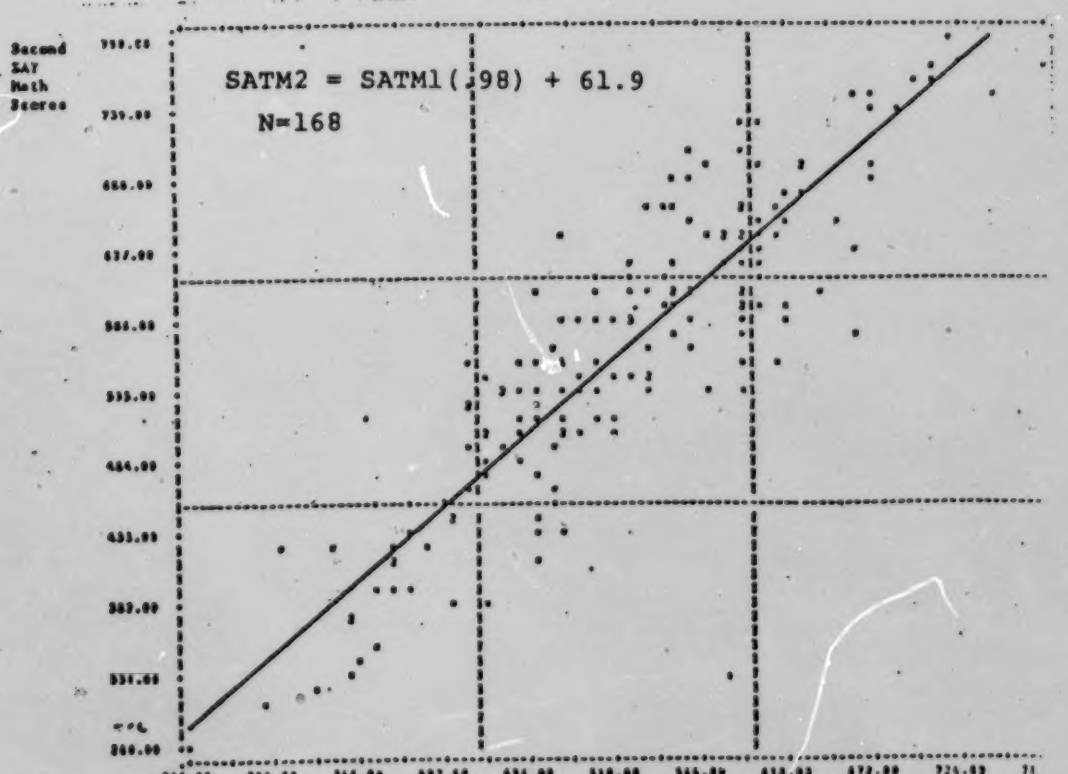
SAT verbal scores for uncoached 2-time takers



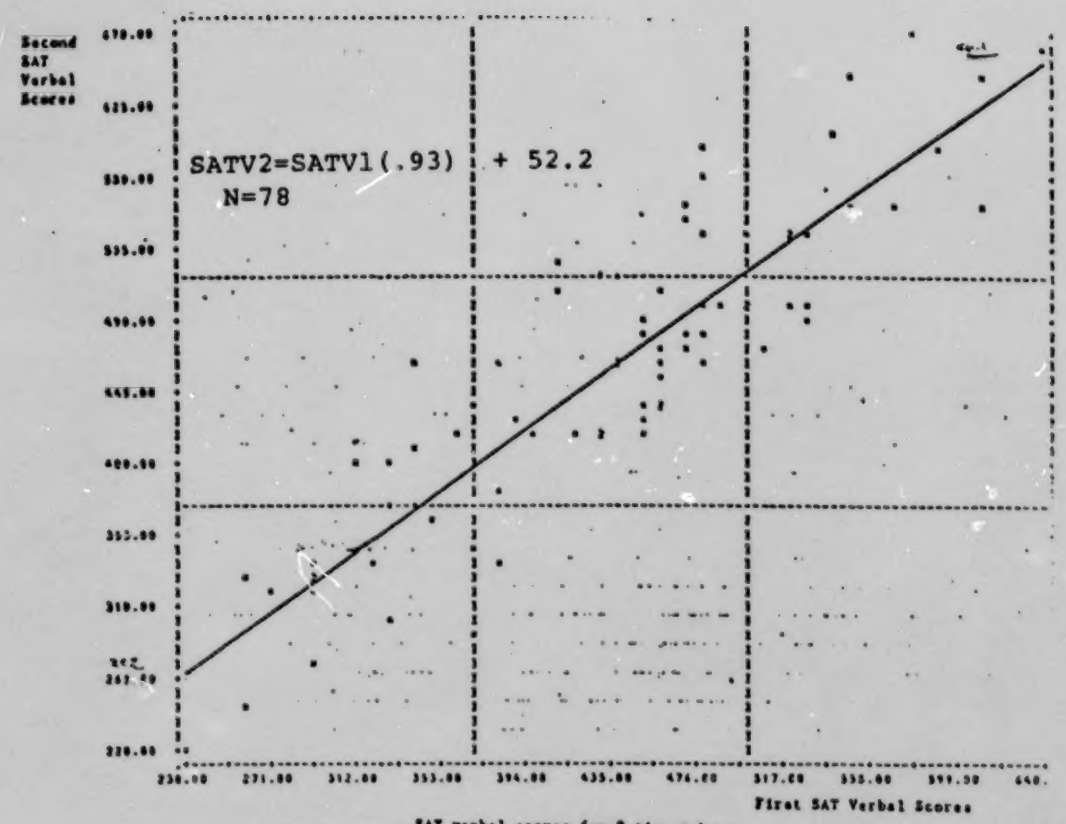
SAT math scores for uncoached 2-time takers



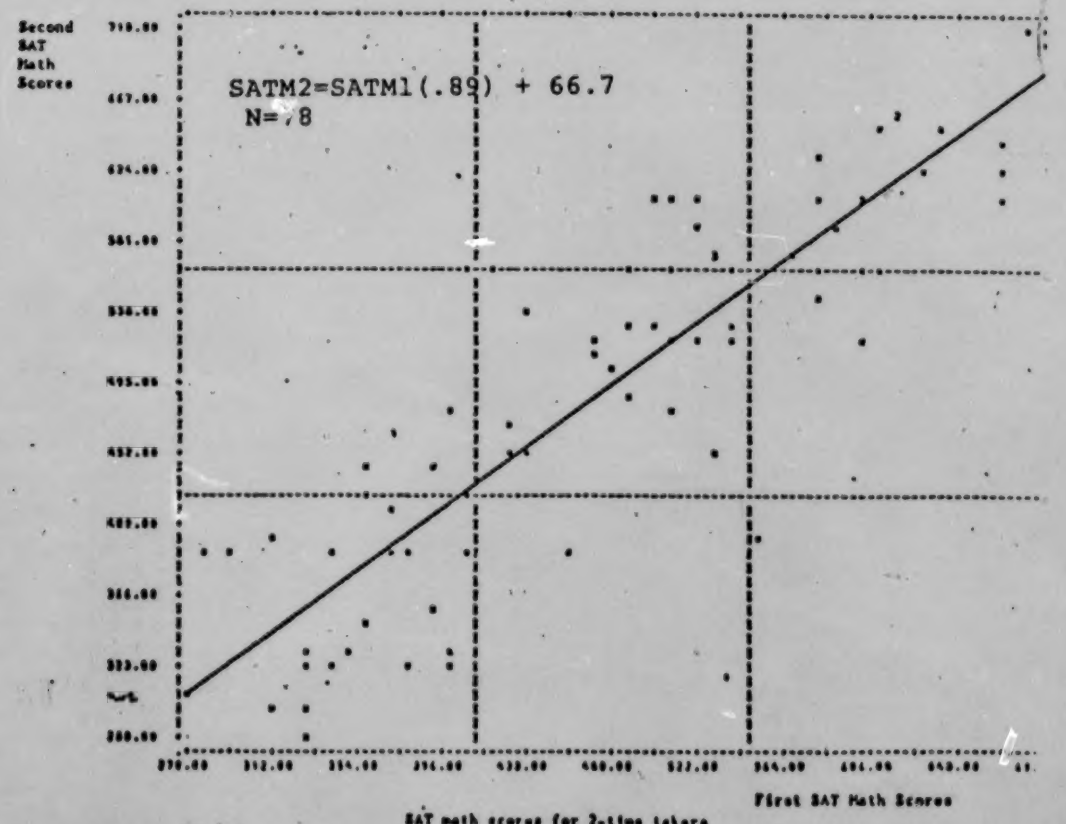
SAT verbal scores for 2-time takers coached at COIA between SAT exams



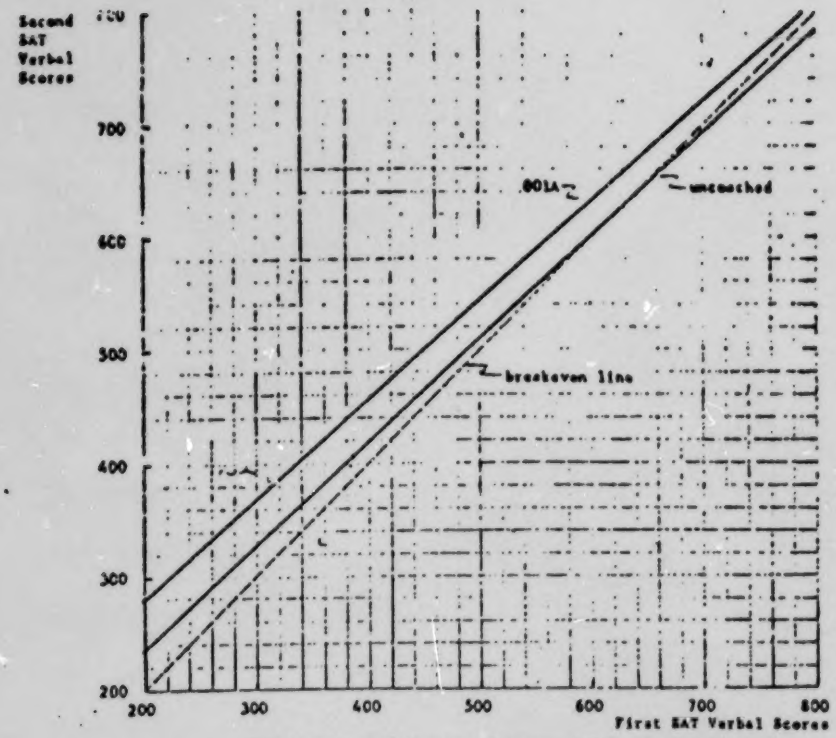
SAT math scores for 2-time takers coached at COIA between SAT exams



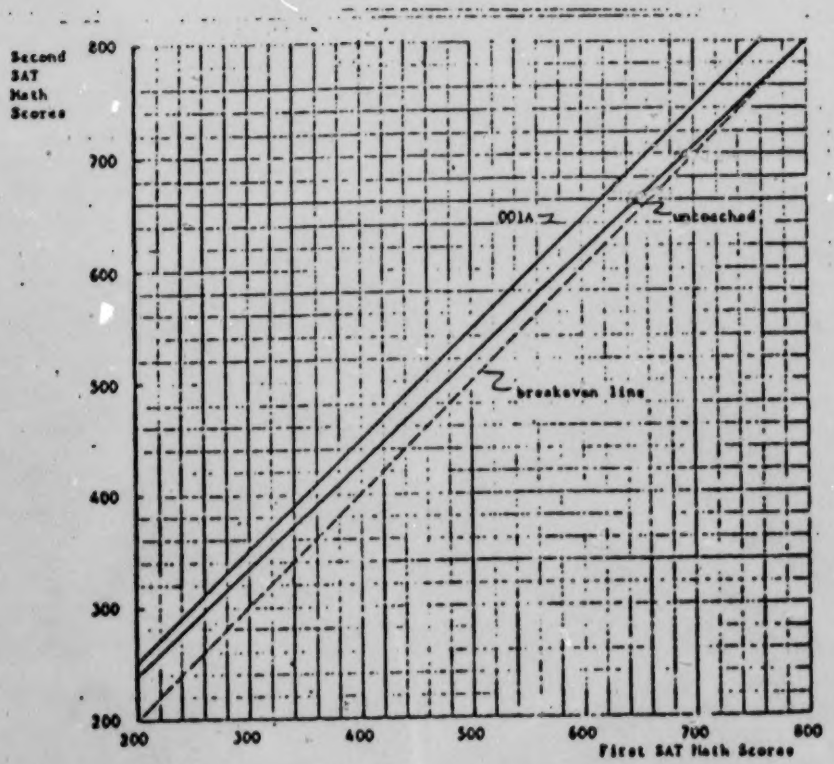
SAT verbal scores for 2-time takers coached at 022 between SAT exams

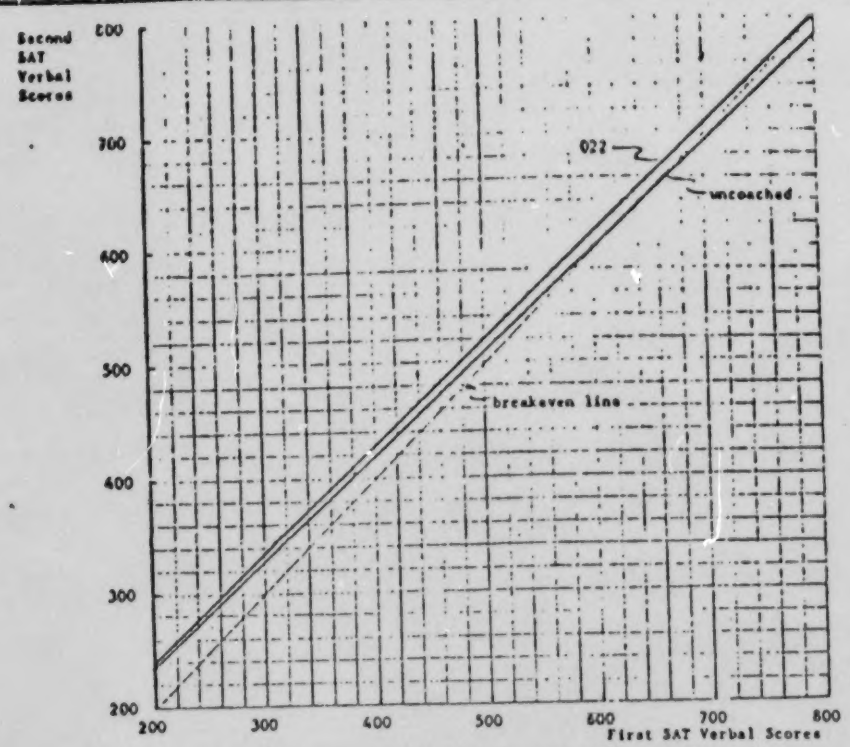


SAT math scores for 2-time takers coached at 022 between SAT exams

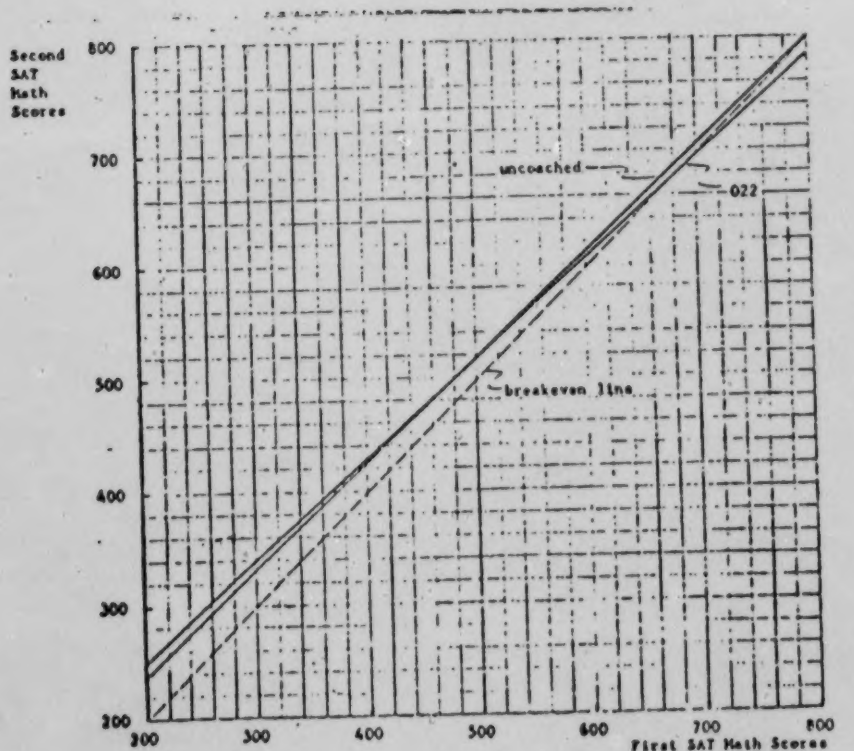


SAT average verbal scores for second-SAT as a function of first-SAT verbal scores, comparing 2-time takers coached at 001A between SAT exams with uncoached 2-time takers





SAT average verbal scores for second-SAT as a function of first-SAT verbal scores, comparing 2-time takers coached at 022 between SAT exams with uncoached 2-time takers



SAT average math scores for second-SAT as a function of first-SAT math scores, comparing 2-time takers coached at 022 between SAT exams with uncoached 2-time takers

T16

B. THE LAW SCHOOL ADMISSION TEST

(1) LSAT scores for white and non-white 1-time takers

As a prelude to the analysis of LSAT coaching, this preliminary section indicates why the effects of coaching are estimated using LSAT scores for whites only.

The first part of this section displays LSAT scores for uncoached white, coached white, uncoached non-white, and coached non-white 1-time takers of the LSAT. Comparison of average LSAT scores for these groups reveals two major distinctions:

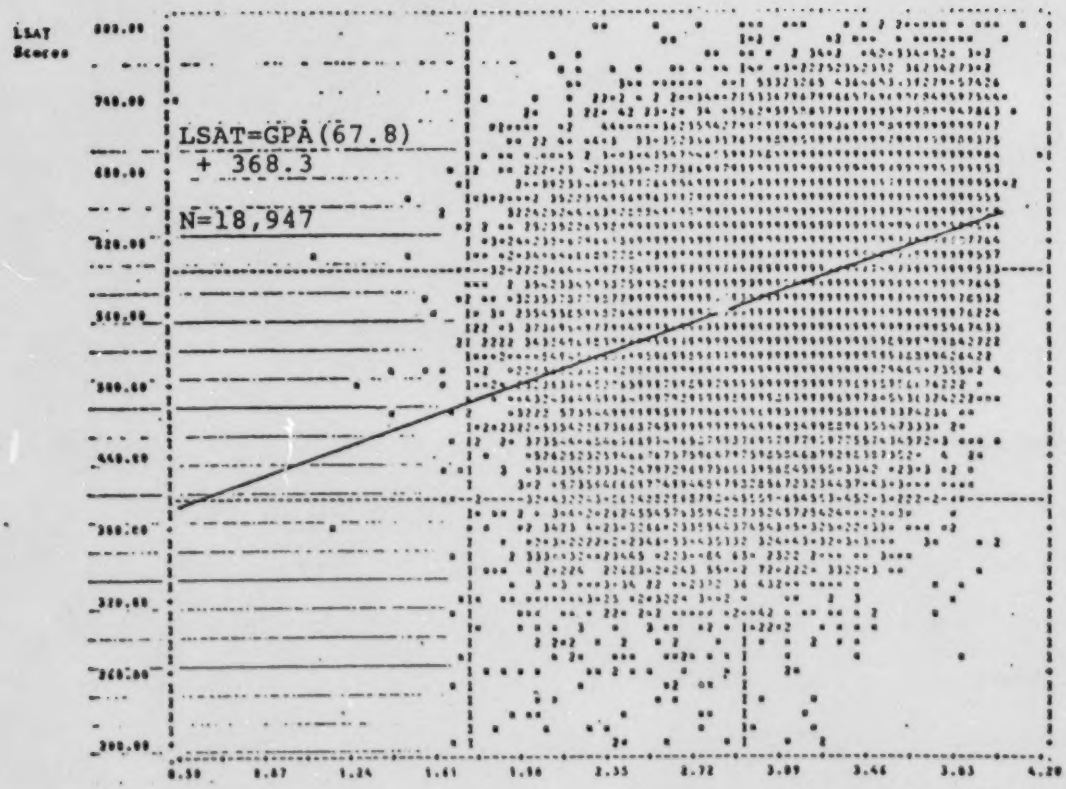
(a) Whites, whether coached or uncoached, perform considerably better than non-whites, whether coached or uncoached, having a similar GPA.

(b) Among whites, LSAT coaching appears to benefit primarily those with a lower GPA; among non-whites, LSAT coaching appears to benefit those with a higher GPA. This LSAT coaching impact for whites appears repeatedly, suggesting that LSAT coaching operates by refining or renewing some basic skills. But if this is so, it is not clear why higher-GPA non-whites benefit more than lower GPA non-whites. In any event, there appears to be a distinct difference in coachability between whites and non-whites.

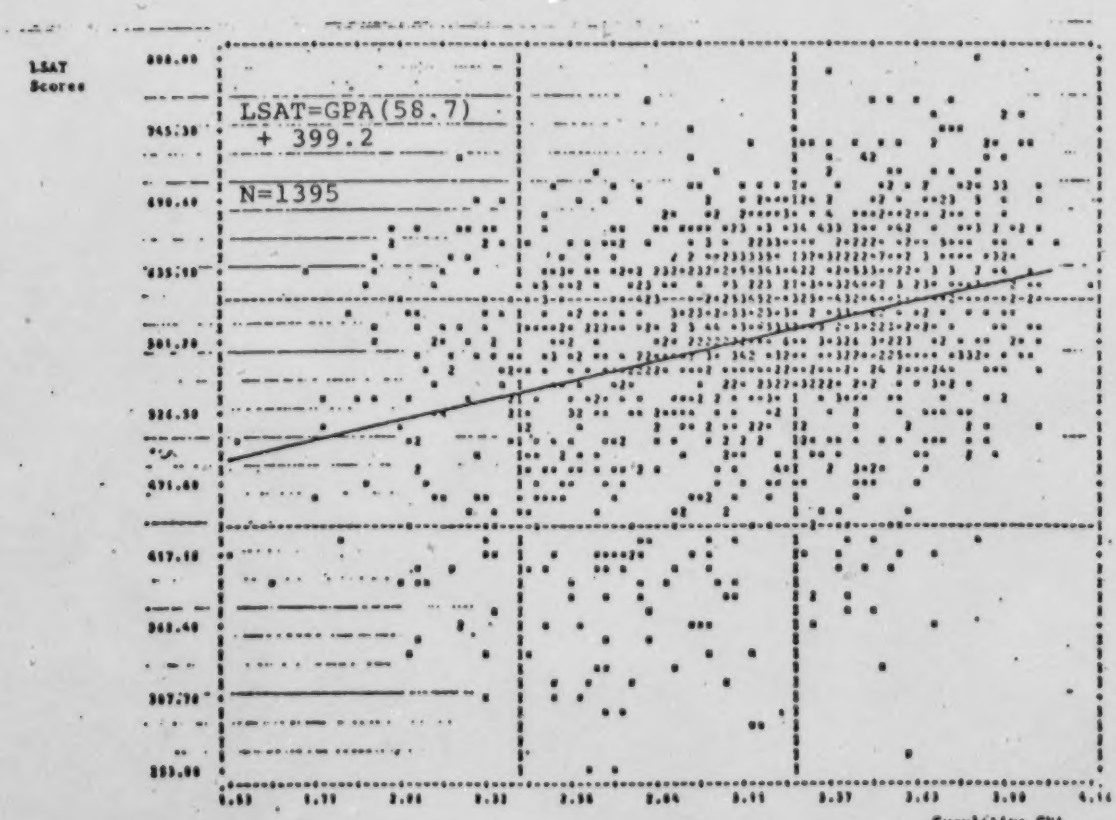
Amplifying on the foregoing, uncoached whites with a GPA of 1.0 (on a 4.0 scale) have conditional average LSAT scores of 436. Uncoached whites with a GPA of 4.0 have conditional average LSAT scores of 640. Uncoached non-whites with a GPA of 1.0 have conditional average LSAT scores of 313 while uncoached non-whites with a GPA of 4.0 have conditional average LSAT scores of 531.

Coached whites with GPA's of 1.0 and 4.0 have conditional average LSAT scores of 458 and 634 respectively. Coached non-whites with GPA's of 1.0 and 4.0 respectively have conditional average LSAT scores of 301 and 556 respectively.

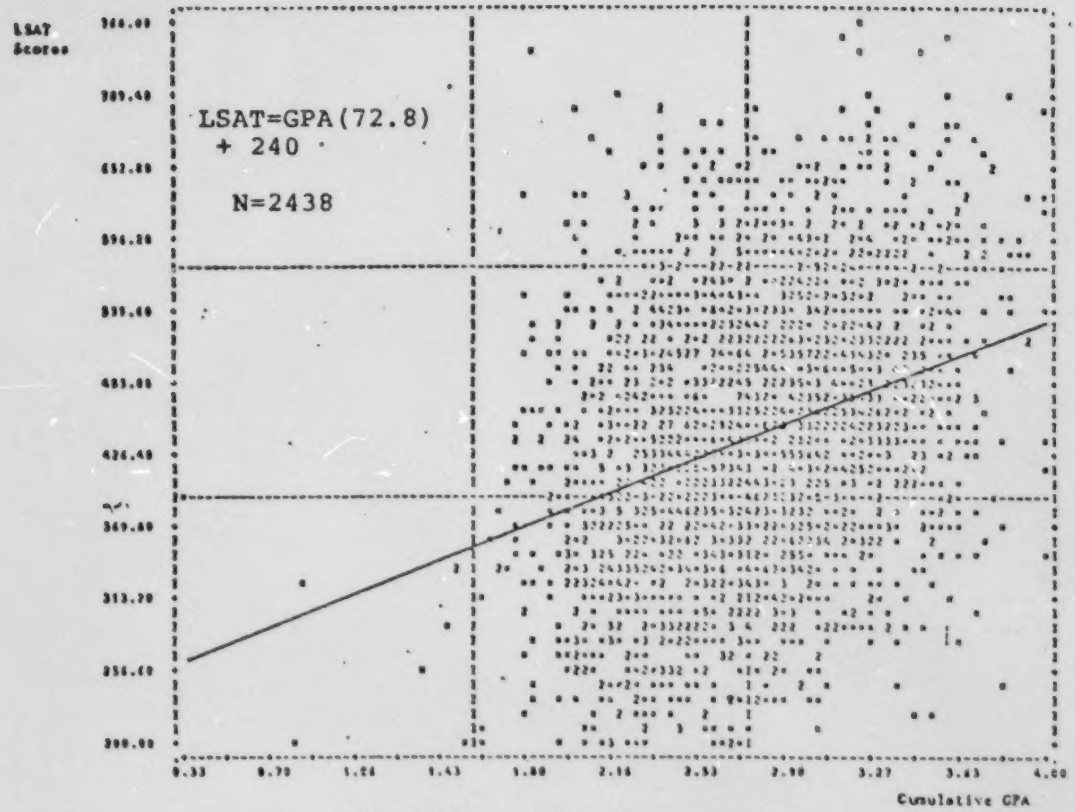
Uncoached whites score on the average between 123 and 108 points higher than their uncoached non-white counterparts with identical GPA's. Coached whites score between 157 and 78 points higher than their coached non-white counterparts with identical GPA's. Coaching prior to taking the first LSAT appears to widen the white/non-white score gap at the low end of the GPA spectrum but narrows the score gap at the upper bound of the GPA range.



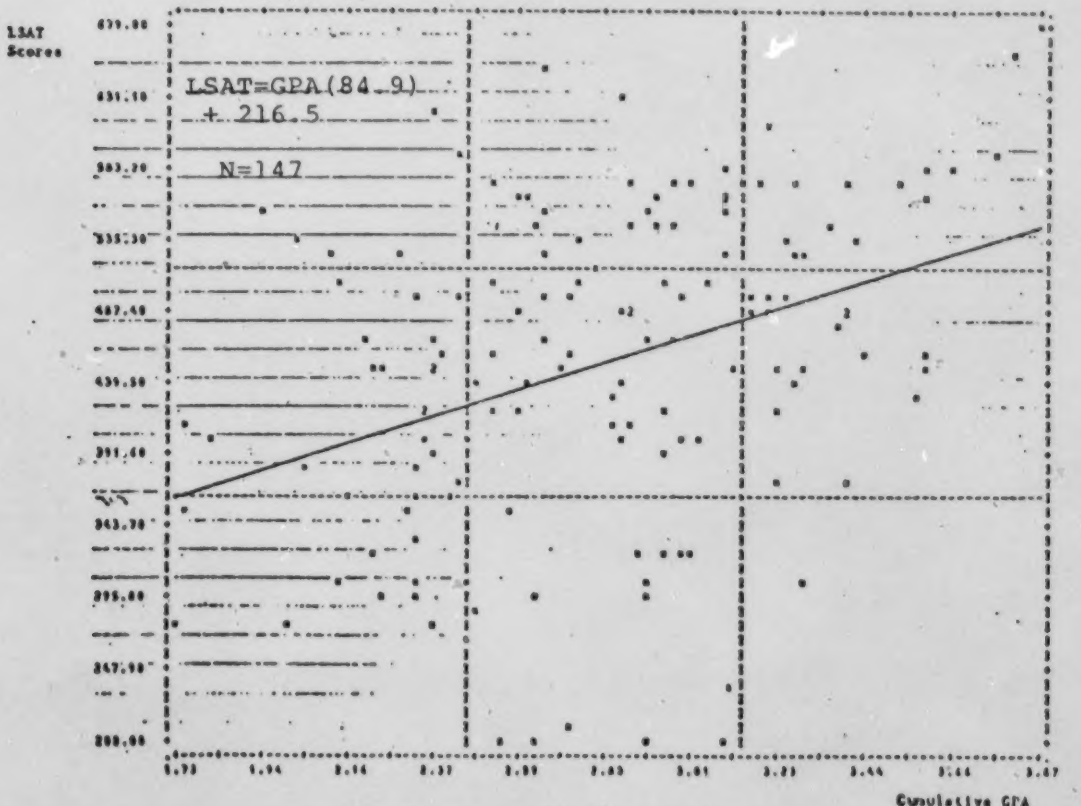
LSAT scores for white uncoached 1-time takers as a function of GPA



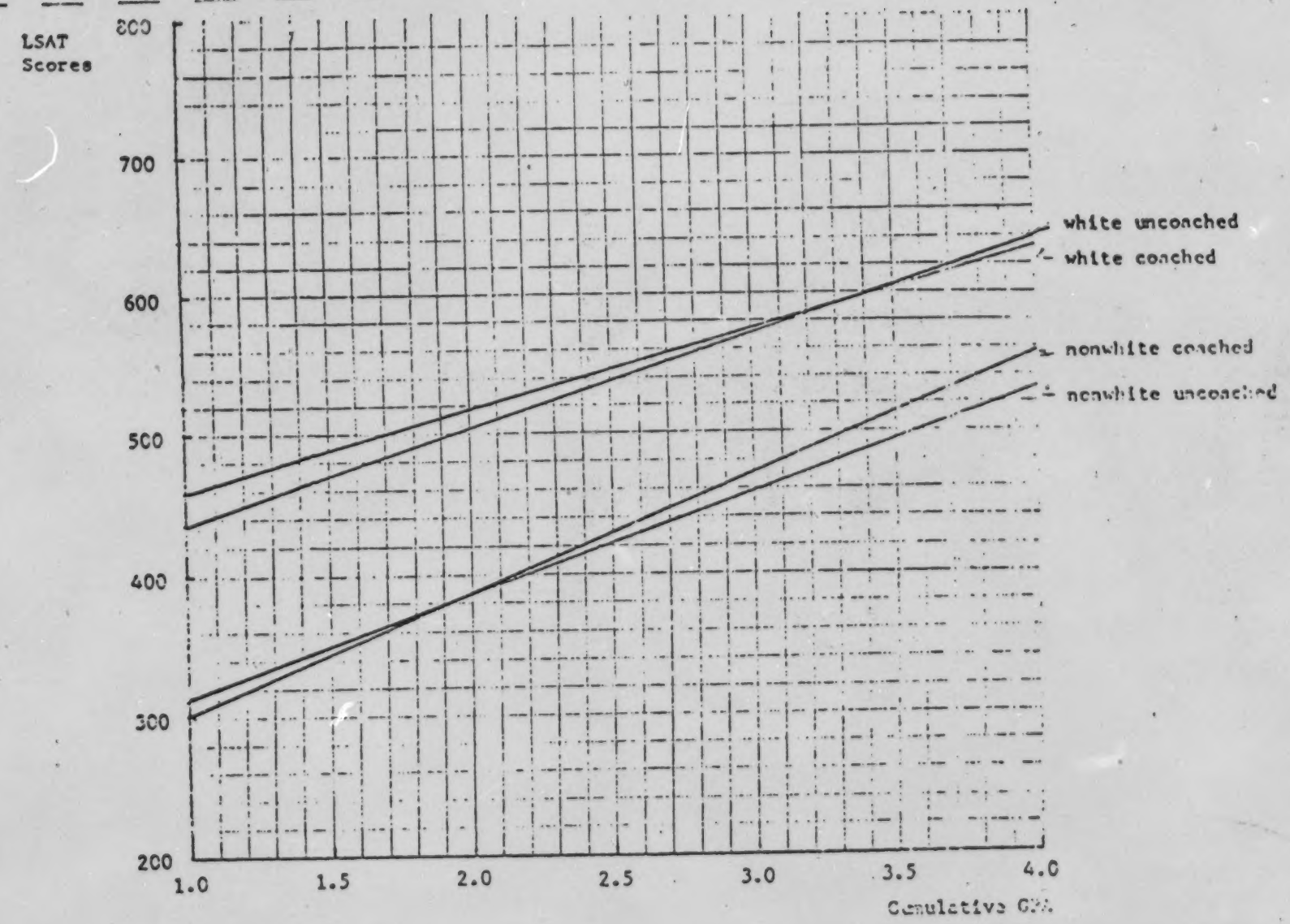
LSAT scores for coached white 1-time takers as a function of GPA



LSAT scores for uncoached nonwhite 1-time takers as a function of GPA



LSAT scores for coached nonwhite 1-time takers as a function of GPA


LSAT Scores
800
700
600
500
400
300
200
1.0
1.5
2.0
2.5
3.0
3.5
4.0
Cumulative GPA
white unconched
white conched
nonwhite conched
nonwhite unconched

106

(2) LSAT scores for uncoached white and non-white 2-time takers

This part of the white/non-white LSAT analysis displays LSAT scores of uncoached white and non-white 2-time takers. Comparison of average LSAT scores for these groups leads to the following conclusions:

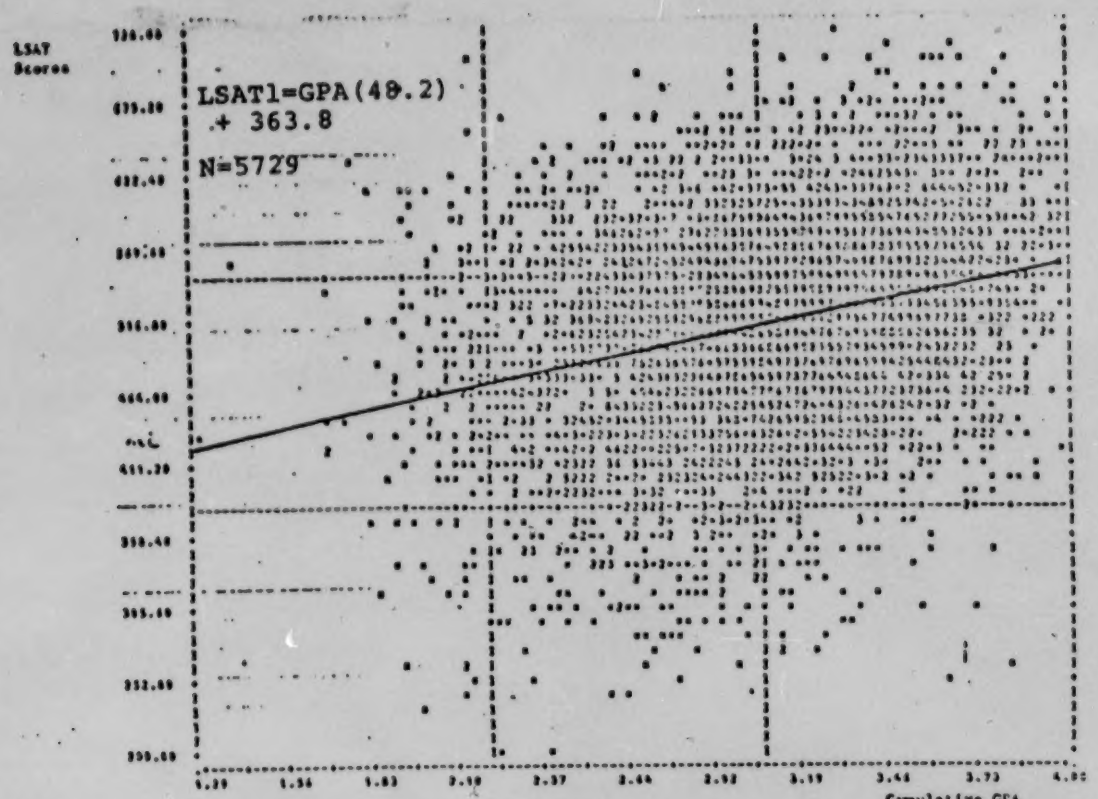
(a) On the average, both whites and non-whites display improvement on their second LSAT attempt.

(b) This upward shift, which is larger for both groups as GPA is higher, may represent a "learning effect"; that is, actual LSAT experience provides information and exam familiarity that are translated into higher scores on the second attempt.

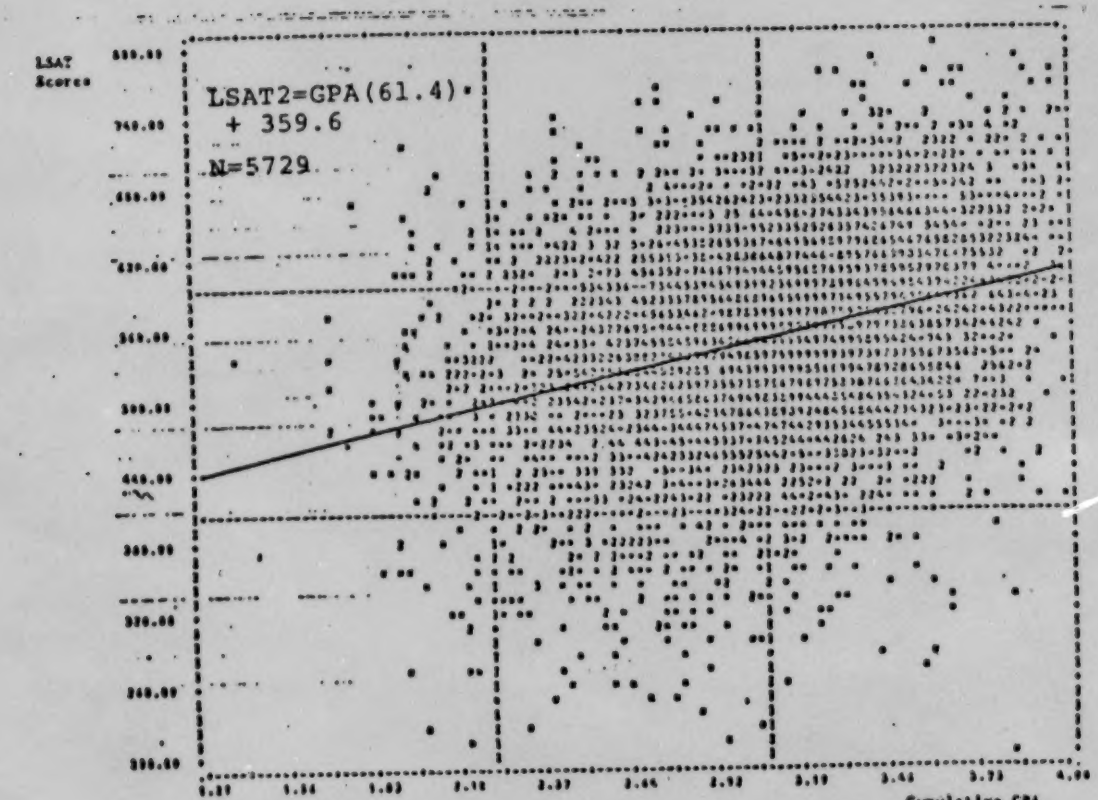
(c) Whatever they actually measure, GPA and LSAT appear to measure somewhat different things; this difference is implied by the relatively low correlation between GPA and LSAT scores. However, increasing GPA presumably bears some relation to demonstrated ability to learn; the same ability to learn which leads to higher GPA may also lead to the higher score gains associated with a higher GPA. This line of reasoning suggests that the LSAT is "learnable" even by uncoached students. It also suggests that students with greater ability to learn in general will find the LSAT more "learnable". Finally, because intergroup score differences grow with increasing GPA, it may be that whites find the LSAT more "learnable" than do non-whites.

Uncoached white 2-time takers of the LSAT show an average LSAT score increase of 9 points at the lower bound of the GPA range and an increase of 50 points at the upper bound of the GPA range.

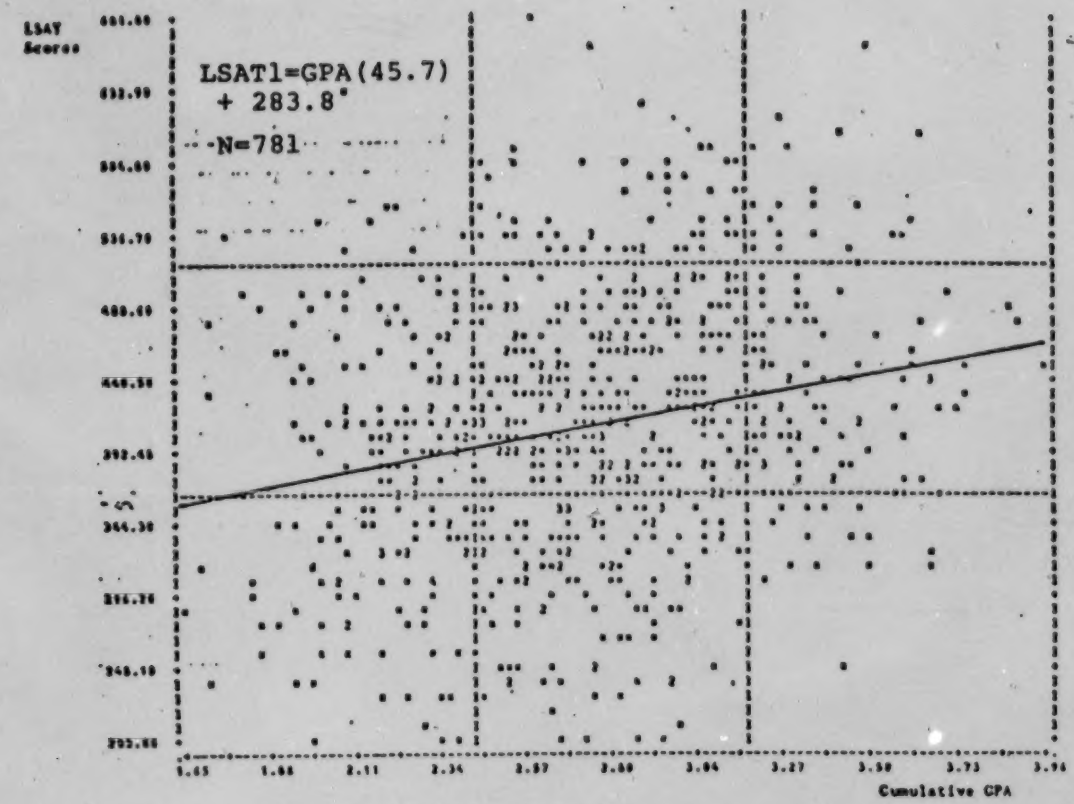
Uncoached non-white 2-time takers show average increases from their first to second LSAT of 13 to 36 points ranging from the lower bound to upper bound of the GPA.



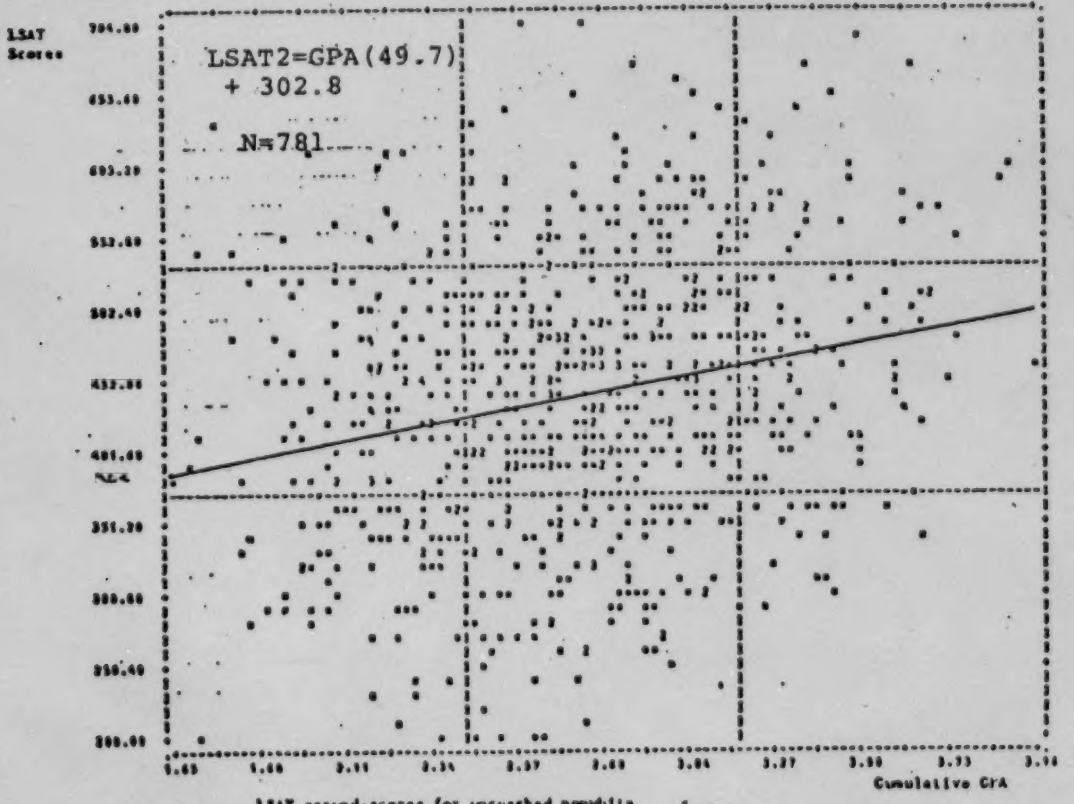
LSAT first-scores for uncoached white 2-time takers as a function of GPA



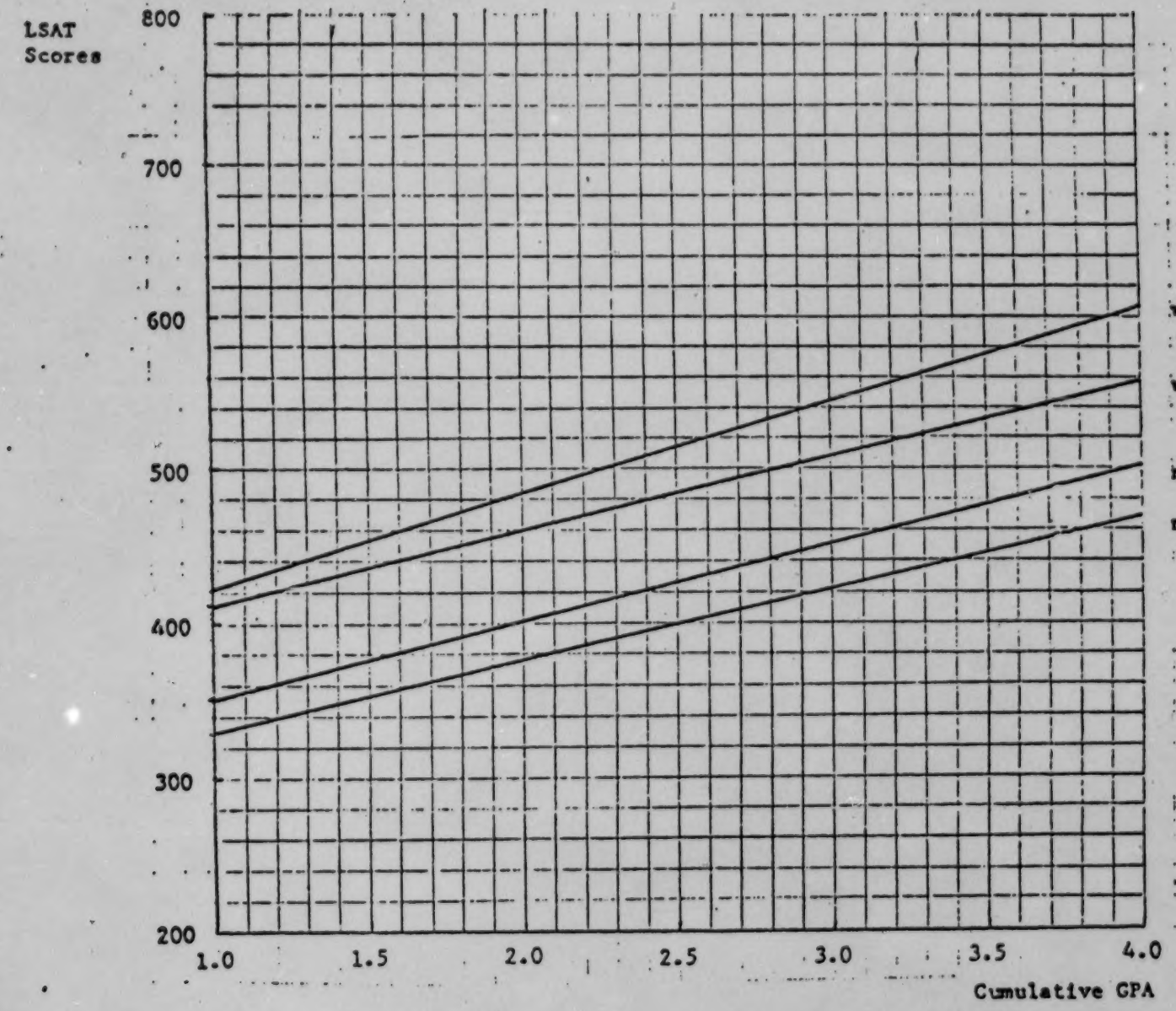
LSAT second-scores for uncoached white 2-time takers as a function of GPA



LSAT first-scores for uncoached nonwhite 2-time takers as a function of GPA



LSAT second-scores for uncoached nonwhite 2-time takers as a function of GPA

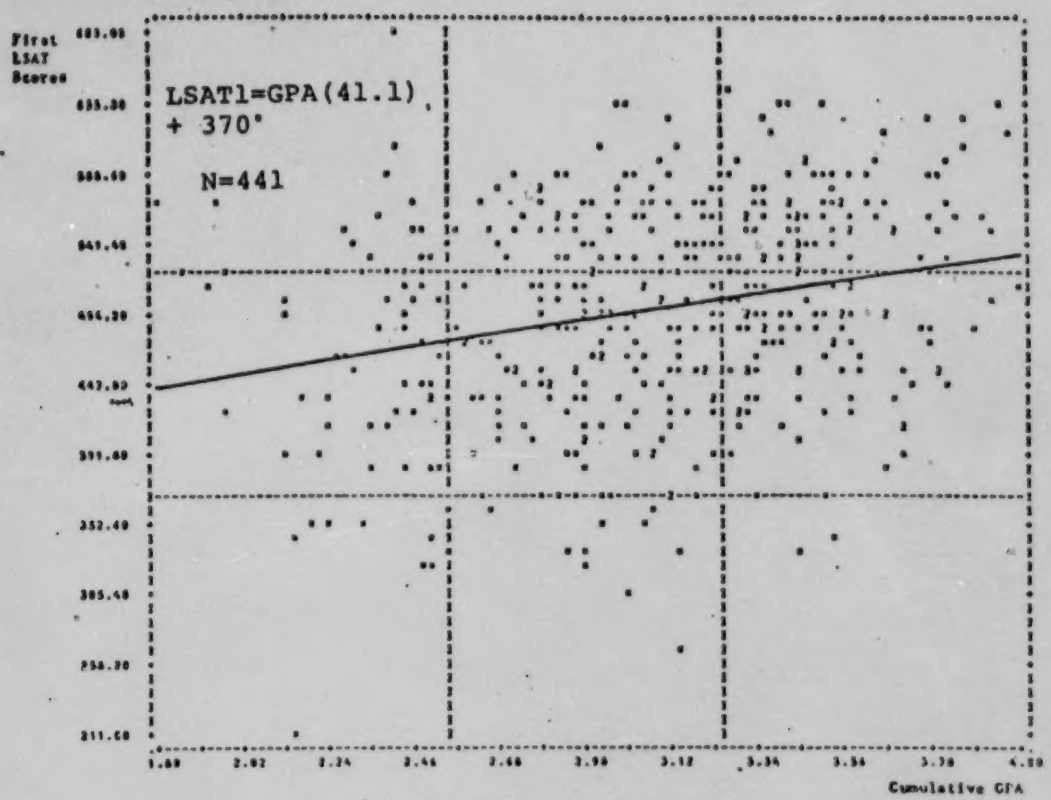


LSAT average scores for uncoached 2-time takers as a function of GPA, comparing whites first-LSAT scores, whites second-LSAT scores, nonwhites first-LSAT scores, and nonwhites second-LSAT scores

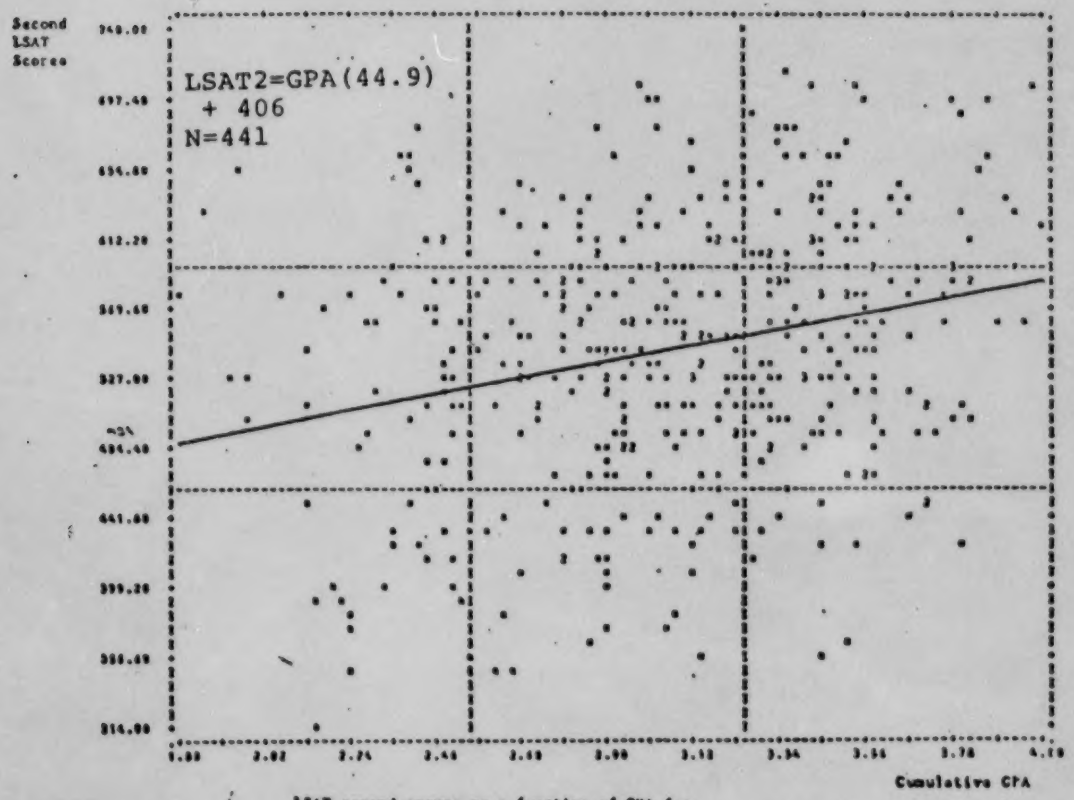
(3) LSAT scores for white and non-white 2-time takers coached between exams

This part of the white/non-white analysis displays LSAT scores for white and non-white 2-time takers coached between exams. Comparison of average scores of these groups, and also comparison against uncoached white and non-white 2-time takers, reinforces the conclusion reached earlier regarding the 1-time takers that LSAT coaching tends to have its greatest benefits for low-GPA whites and high-GPA non-whites. Despite coaching, marked LSAT score differences persist between whites and non-whites.

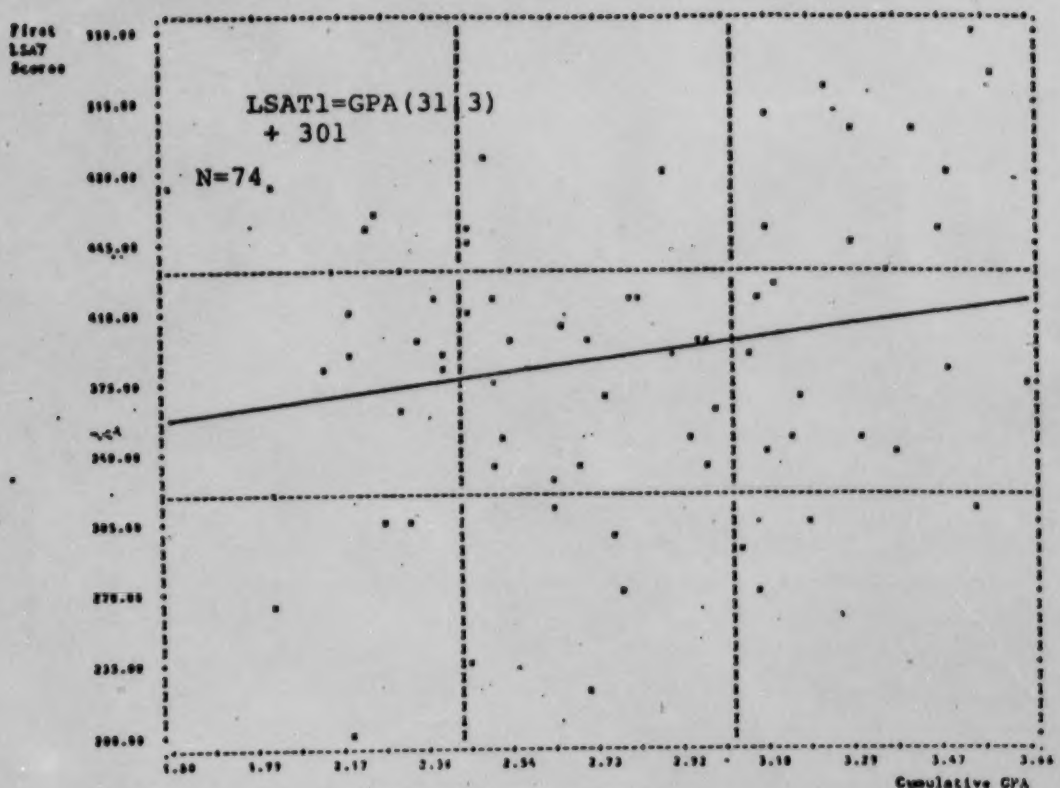
For example, whites with a GPA of 1.0 coached between administrations of the LSAT show score increases of 40 points. Their non-white counterparts show score increases of 2 points. Whites with a GPA of 4.0 coached between exams show conditional average score increases of 51 points. Their non-white counterparts show conditional average increases of 65 points. The overall effects of coaching for 2-time takers of the LSAT based on a comparison of this section and the preceding section may give the impression that at least in this category (2-time takers) coaching has at best marginal benefits. However as we will demonstrate when examining individual coaching schools in an unaggregated form, this conclusion is not warranted for for all schools.



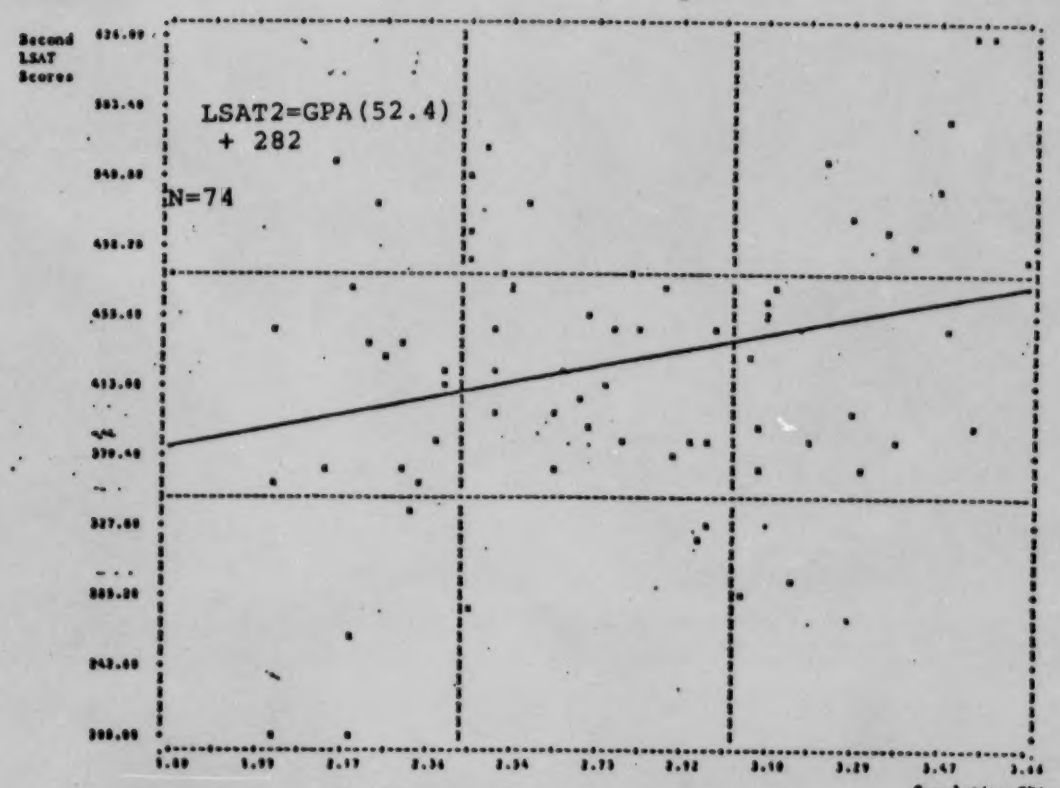
LSAT first-scores as a function of GPA for white 2-time takers coached between LSAT exams



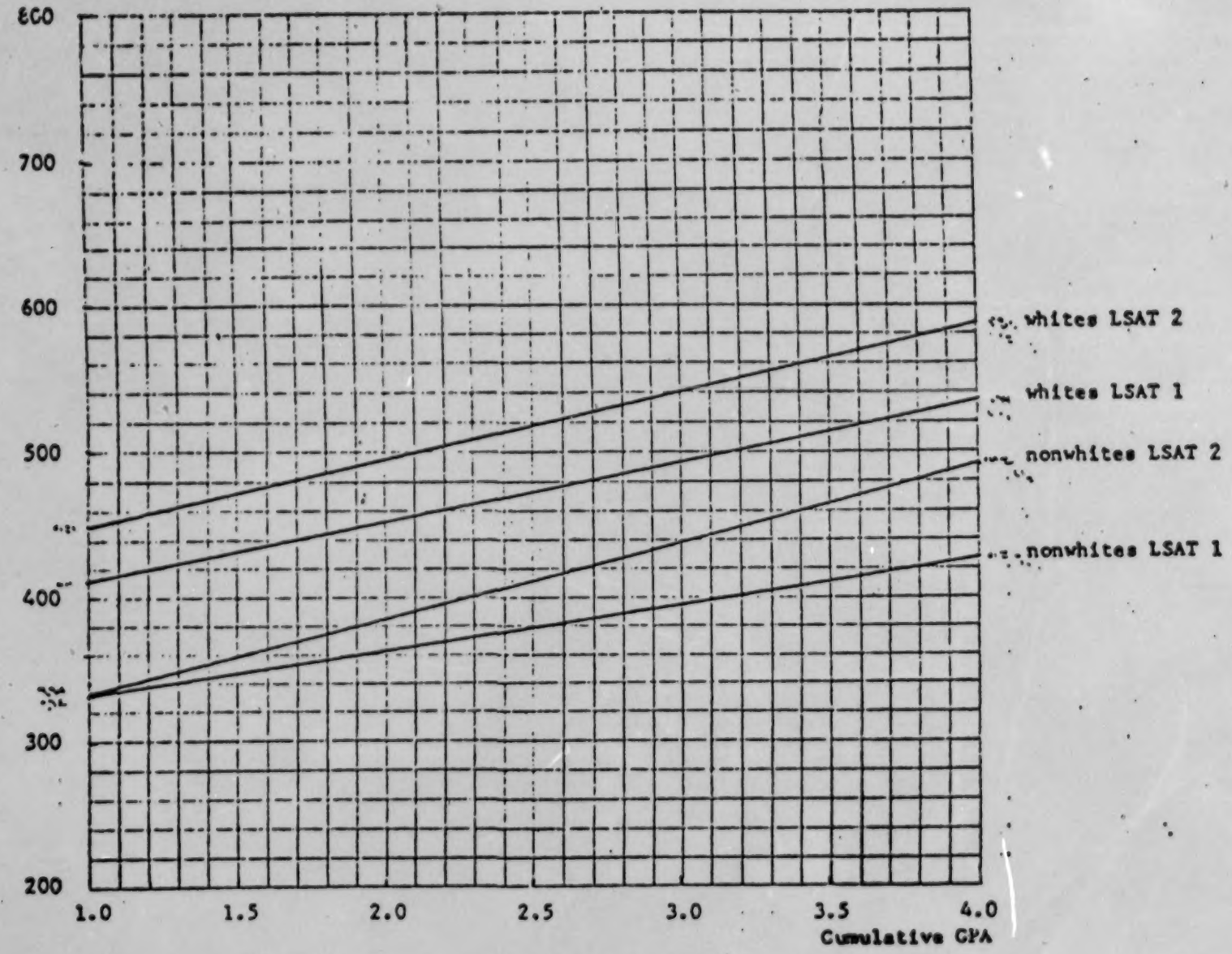
LSAT second-scores as a function of GPA for white 2-time takers coached between LSAT exams



LSAT first-scores as a function of GPA for nonwhite 2-time takers coached between LSAT exams



LSAT second-scores as a function of GPA for nonwhite 2-time takers coached between LSAT exams



LSAT average scores for 2-time takers coached between exams with LSAT scores as a function of GPA, comparing whites and nonwhites

(4) LSAT first and second scores for white and non-white 2-time takers

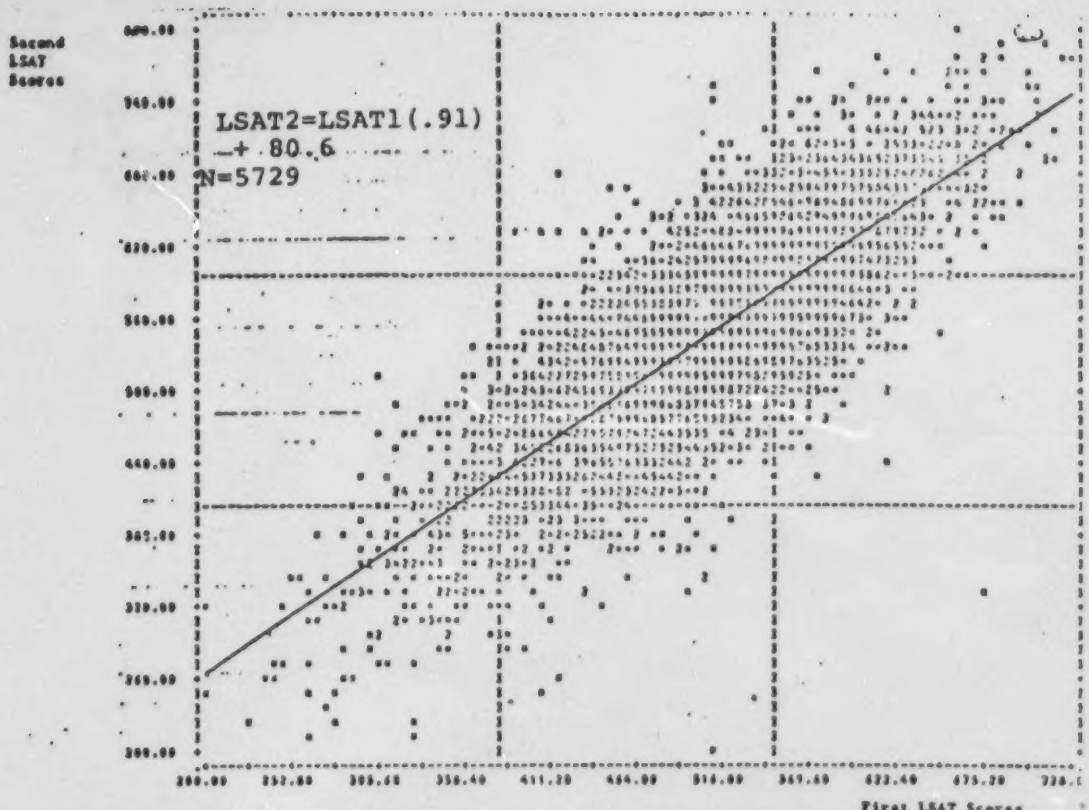
This final part of the white/non-white LSAT analysis displays and compares second-LSAT scores as a function of first-LSAT scores. Shown are LSAT scores for uncoached whites, uncoached non-whites, coached whites, and coached non-whites.

The first set of comparisons displays differences between uncoached whites and uncoached non-whites and between coached whites and coached non-whites. In both comparisons, whites outperform non-whites, with greater differences appearing at higher first-LSAT scores for the uncoached groups and at lower first-LSAT scores for the coached groups. The second set of comparisons reveals that coaching is more beneficial for whites in the lower score ranges than for non-whites with similar first-LSAT scores.

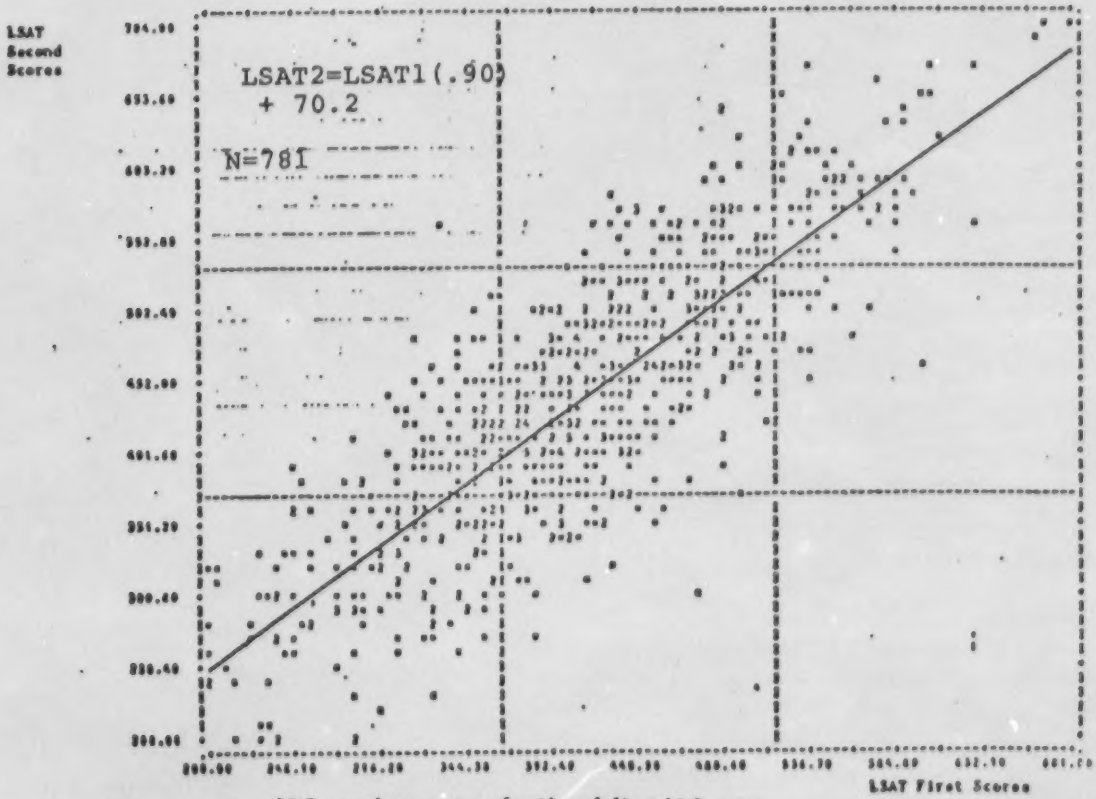
This study does not attempt to explain these persistent differences in LSAT scores. We appear to have an effect without an identified cause. However, to clarify subsequent comparisons among LSAT coaching schools and between coached and uncoached students, non-whites are excluded from the remaining analyses. Such exclusion allows subsequent analysis to compare relatively more homogeneous groups. In addition, relatively few non-whites enroll in coaching schools, so that data are too sparse to rigorously evaluate individual coaching schools regarding the extent to which they benefit non-white

students. Uncoached whites with an initial LSAT score of 200 show score gains of 63 points compared with average gains of 96 points for their coached counterparts. Uncoached whites with initial LSAT scores of 800 show theoretical gains of 9 points compared to theoretical decreases of 2 points for their coached counterparts.

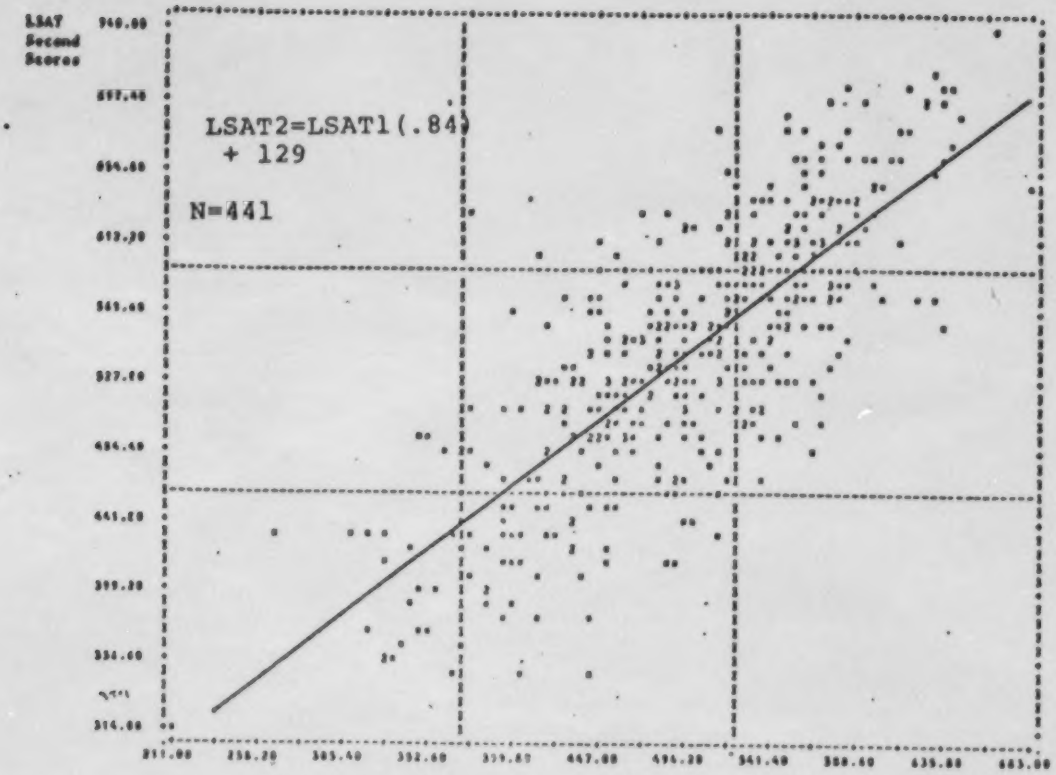
Uncoached non-whites with an intitial LSAT score of 200 show average gains of 50 LSAT points while their coached counterparts show average gains of 71 points. Uncoached non-whites with theoretical intitial scores of 800 show average decreases of 10 points whereas their coached counterparts reveal average decreases of 32 points.



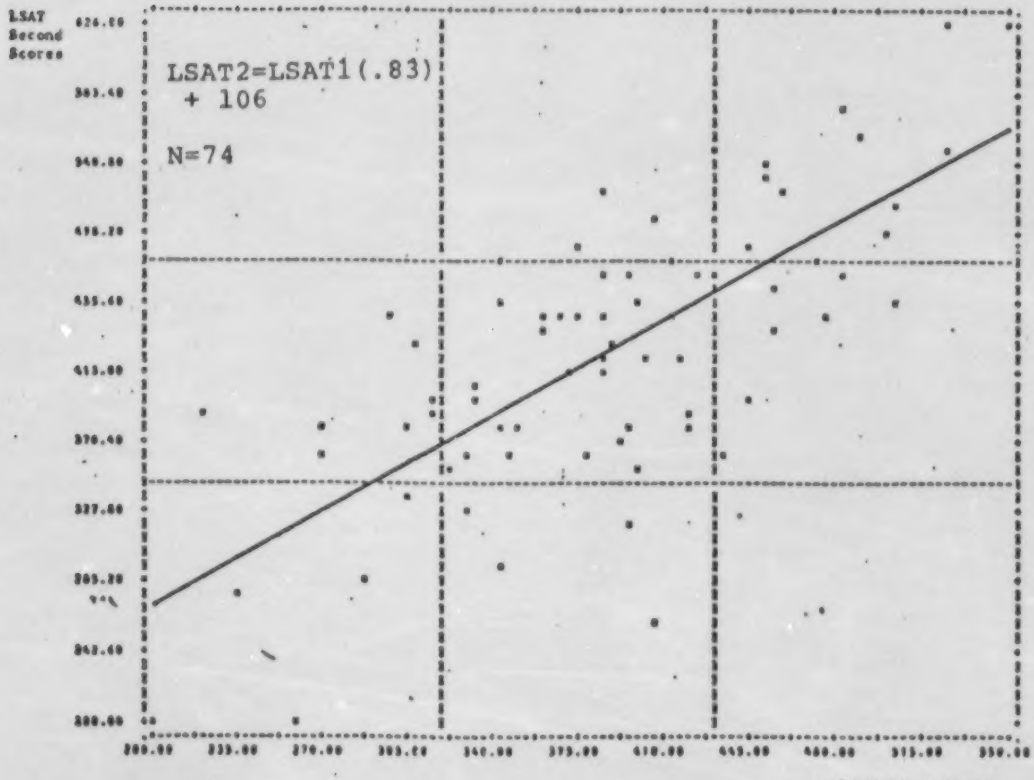
LSAT second scores as a function of first-LSAT scores for white uncoached 2-time takers



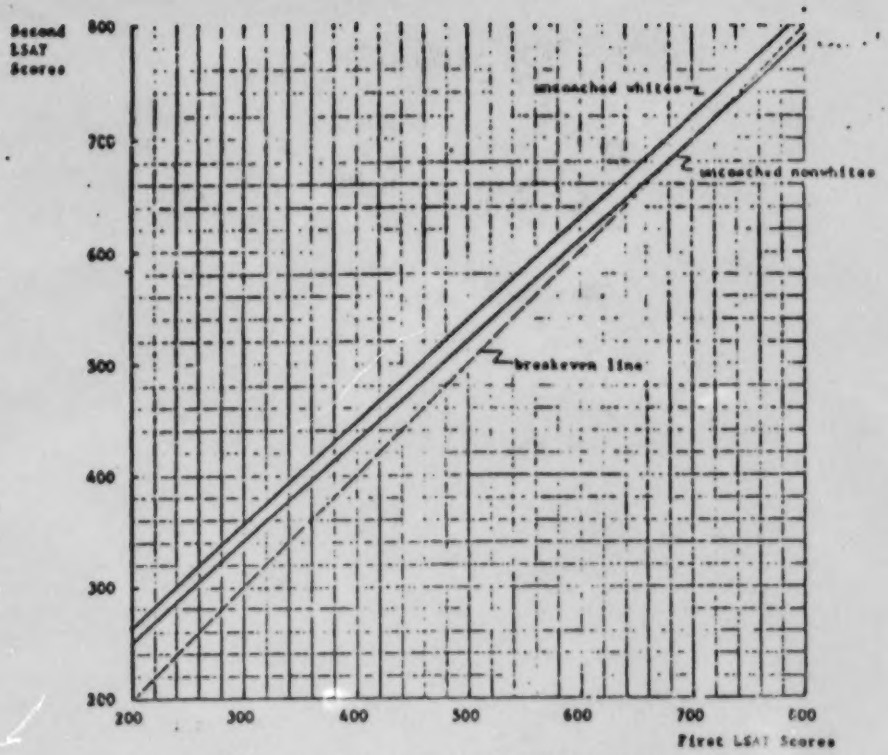
LSAT second scores as a function of first-LSAT scores for nonwhite uncoached 2-time takers



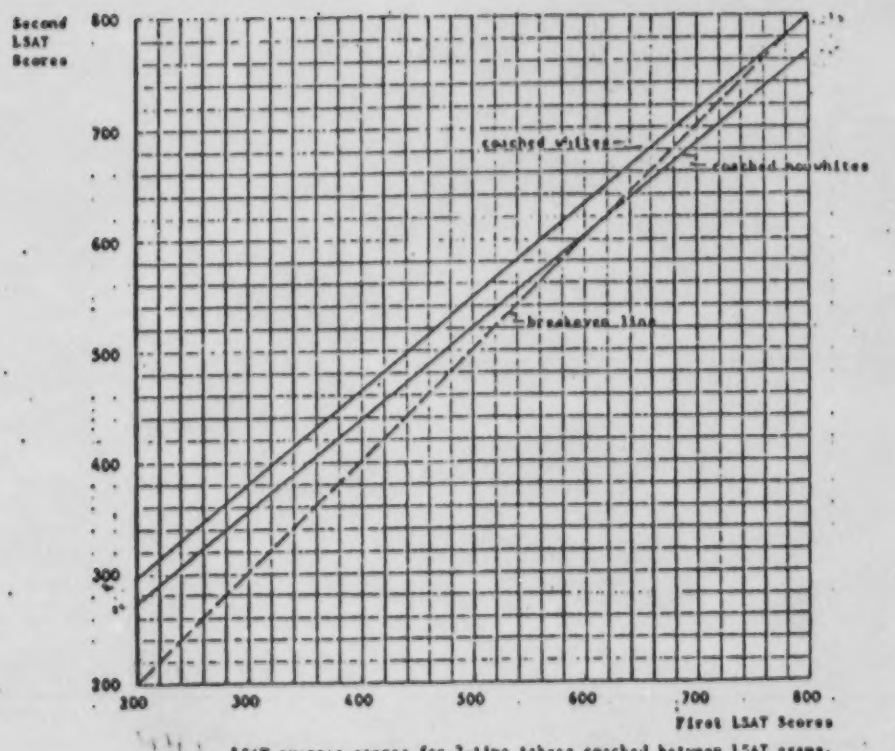
LSAT second scores as a function of first-LSAT scores for white 2-time takers coached between exams



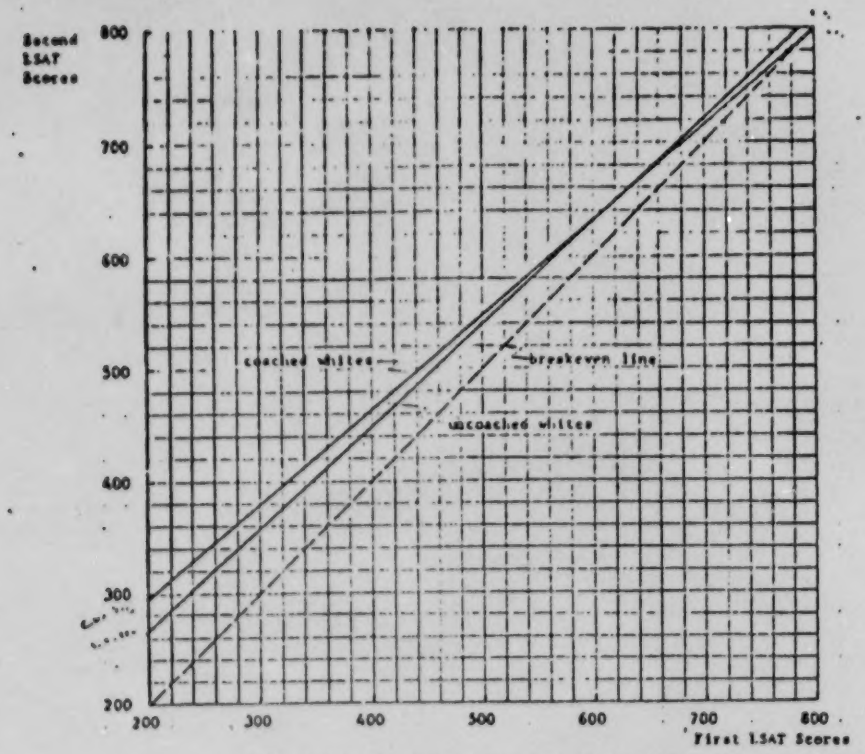
LSAT second scores as a function of first-LSAT scores for nonwhite 2-time takers coached between exams



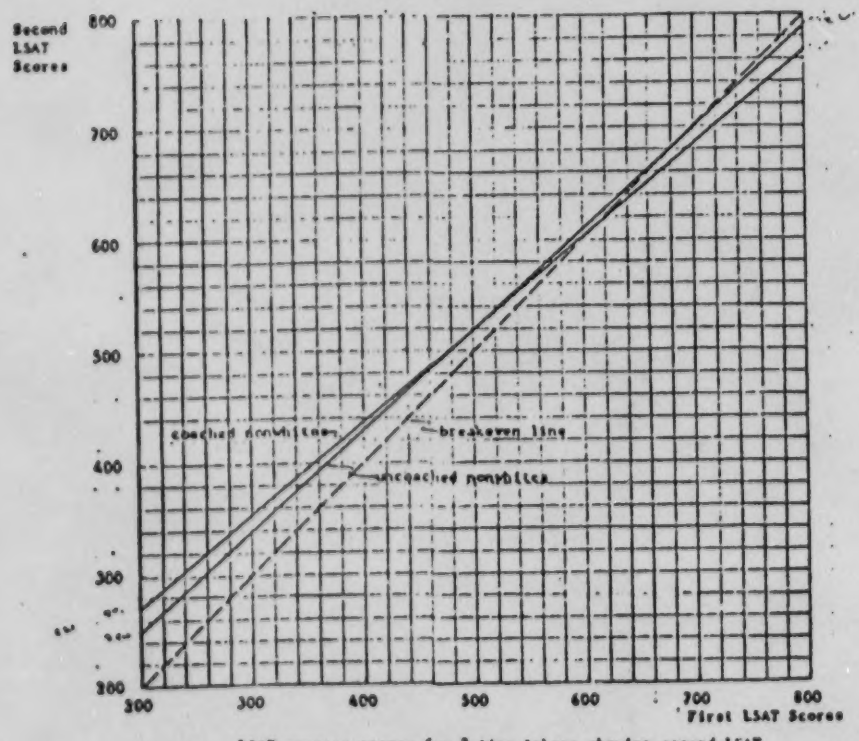
LSAT average scores for uncoached 2-time takers with second-LSAT as a function of first-LSAT, comparing whites and nonwhites



LSAT average scores for 2-time takers coached between LSAT exams, showing second-LSAT scores as a function of first-LSAT scores, comparing whites and nonwhites



LSAT average scores for 2-time takers, showing second-LSAT scores as a function of first-LSAT scores, comparing uncoached whites with whites coached between LSAT exams



LSAT average scores for 2-time takers showing second-LSAT scores as a function of first-LSAT scores, comparing uncoached nonwhites with nonwhites coached between LSAT exams

(5) LSAT scores for 1-time takers

This section displays actual LSAT scores for 1-time takers coached at various schools against uncoached 1-time takers. These comparisons reveal that:

(a) Stanley H. Kaplan Educational Centers (SHK) (001) provides effective coaching for the LSAT;

(b) All coaching schools seem to help low-GPA students more than high-GPA students;

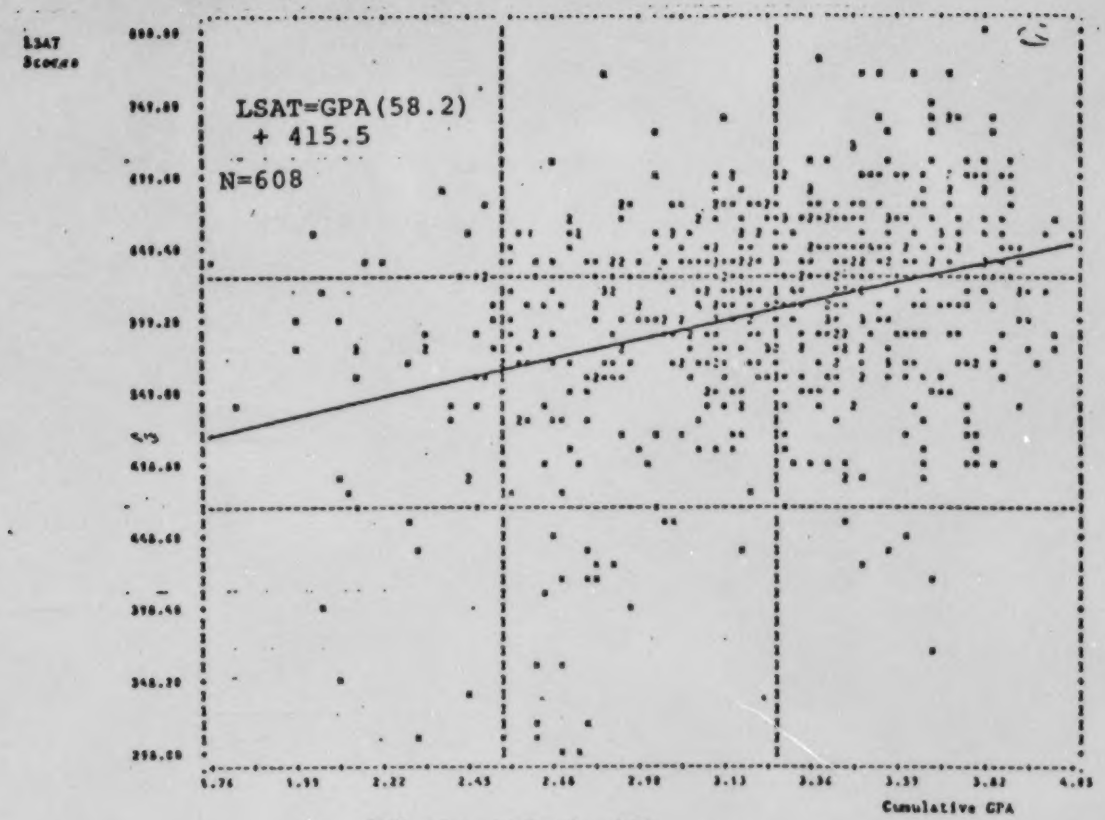
(c) The Amity Review Course (Amity) (002) and John Sexton's LSAT Preparation Center (Sexton) (003) appear to be marginally effective at best; and

(d) The LSAT Review Course (Evergreen) (004) and a composite of small coaching schools (005-021) appear to be effective primarily among low-GPA students.

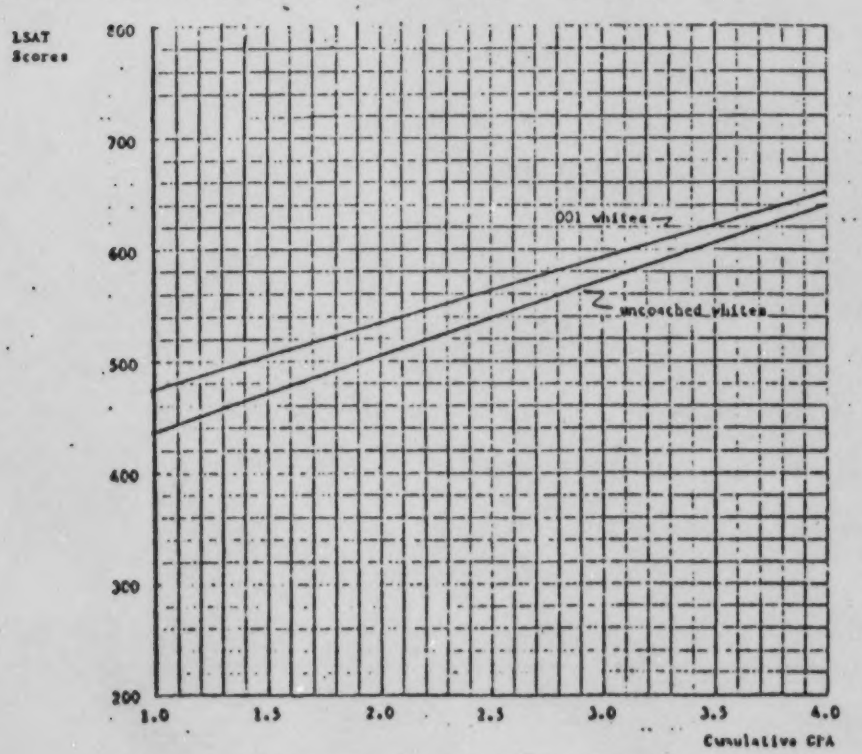
The following table reflects average conditional first LSAT scores as a function of GPA for those individuals coached before taking the LSAT and for the uncoached group.

GPA	1.0	4.0
Uncoached	436	640
001	474	648
002	407	619
003	444	625
004	485	614
Others	478	610

The greatest net benefit is shown by Evergreen's increase of 49 points at the 1.0 GPA level. At the 4.0 GPA level only SHK shows an increase and that of only 8 points.

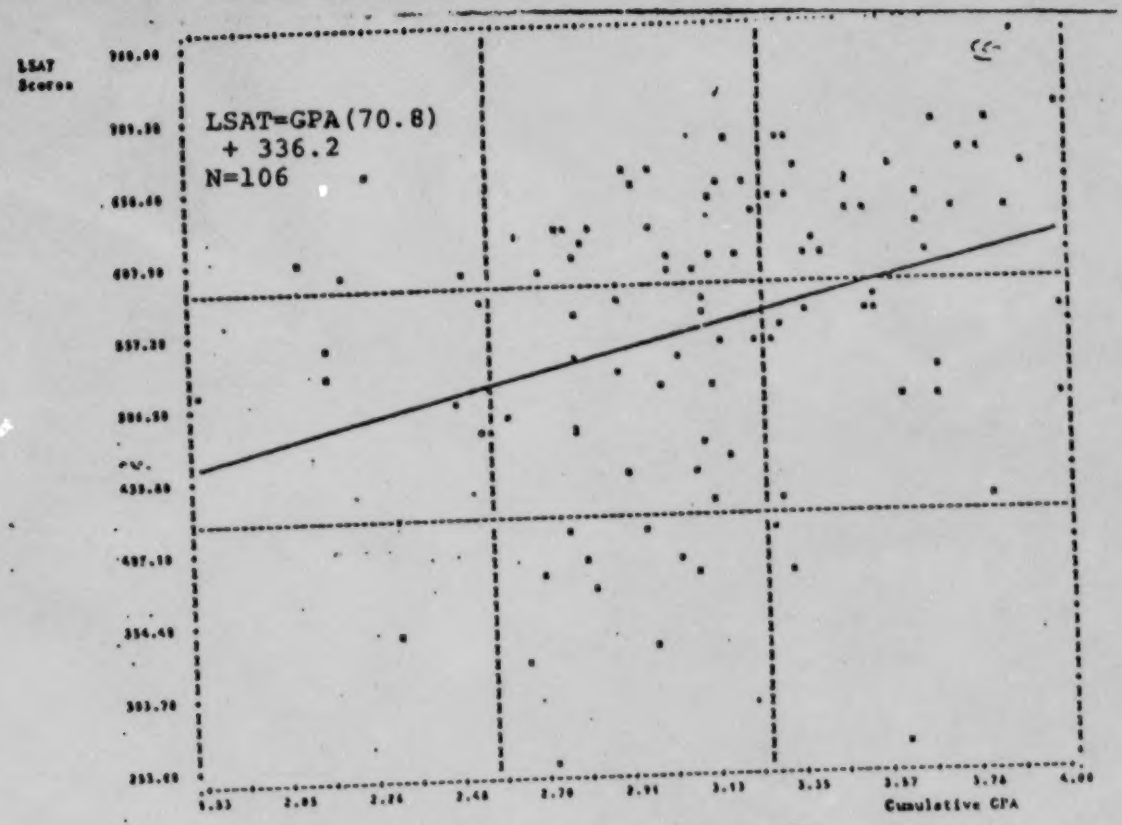


LSAT scores as a function of GPA
for white 1-time takers coached at 001

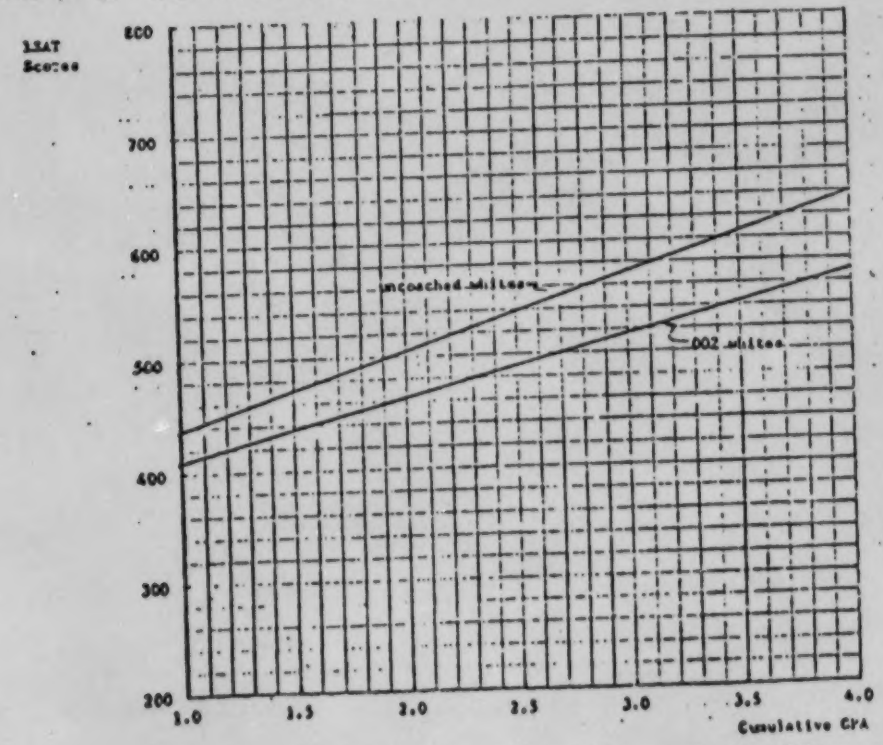


LSAT average scores for 1-time takers as a function of GPA,
comparing whites coached at 001 with uncoached whites

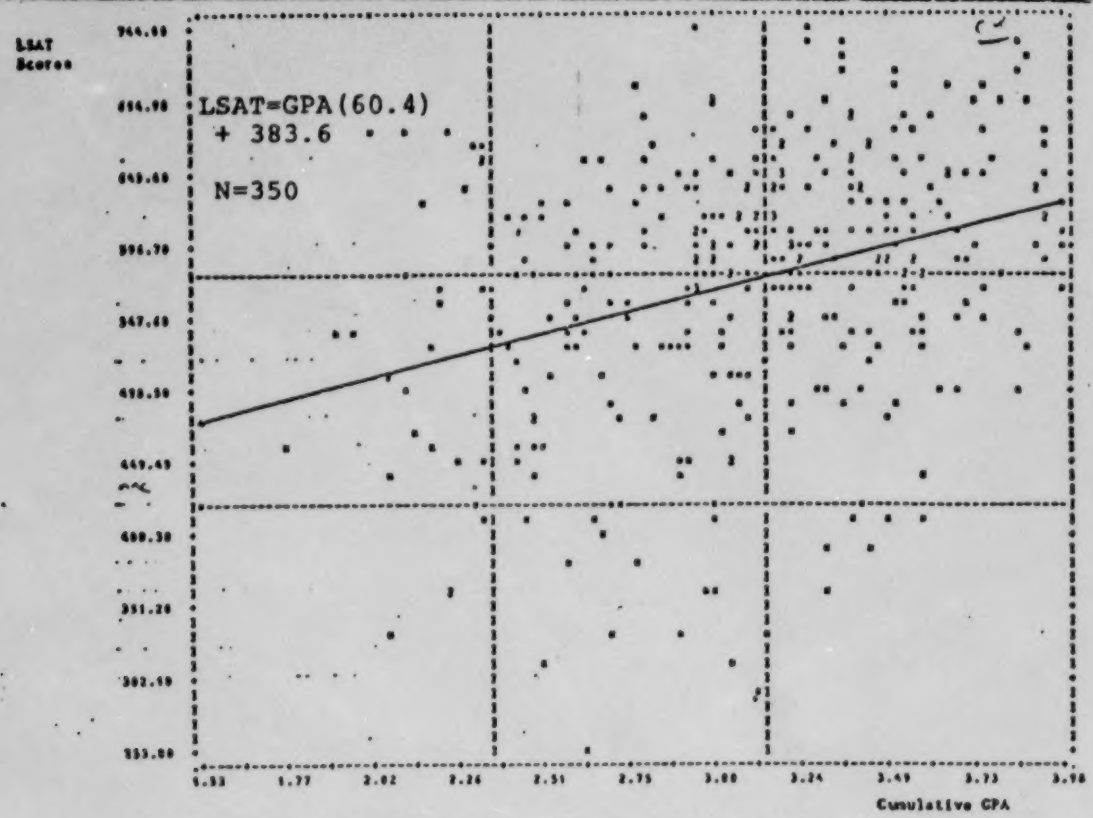
140



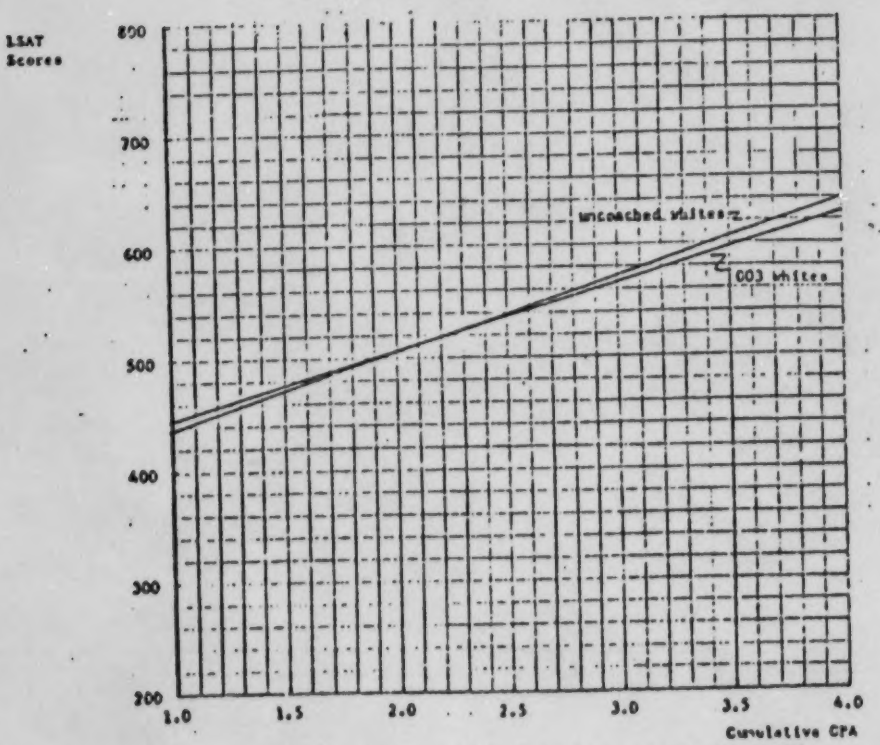
LSAT scores for 1-time takers as a function of GPA
for whites coached at 002



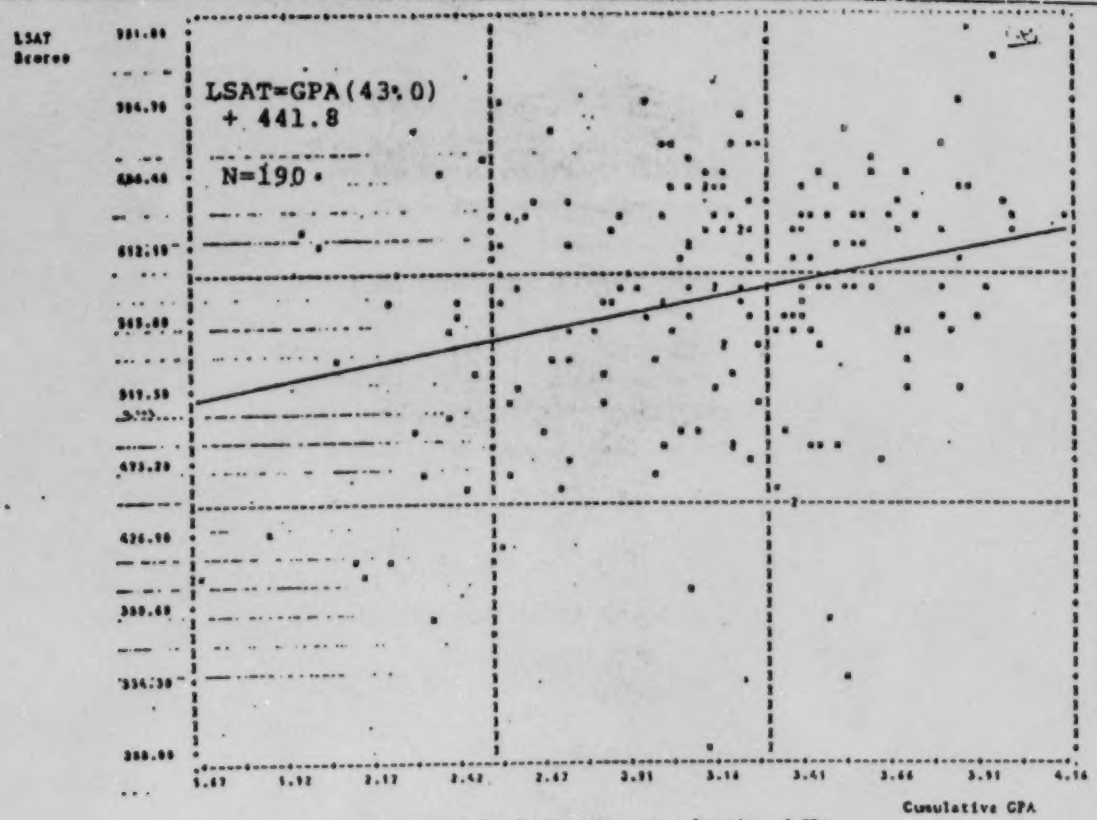
LSAT average scores for 1-time takers as a function of GPA
comparing whites coached at 002 with uncoached whites



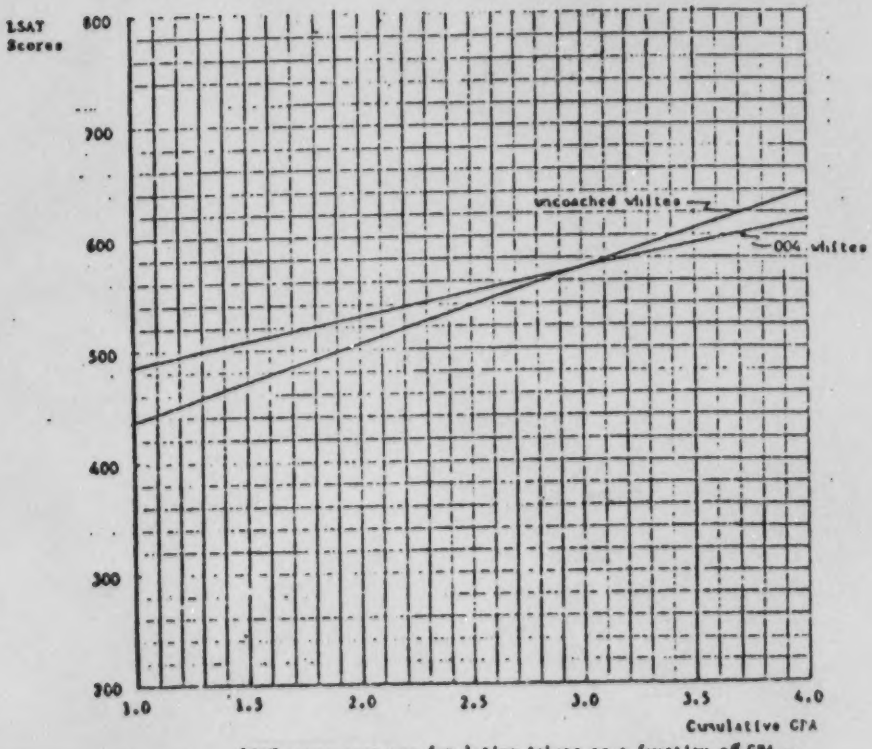
LSAT scores for 1-time takers as a function of GPA for whites coached at 003



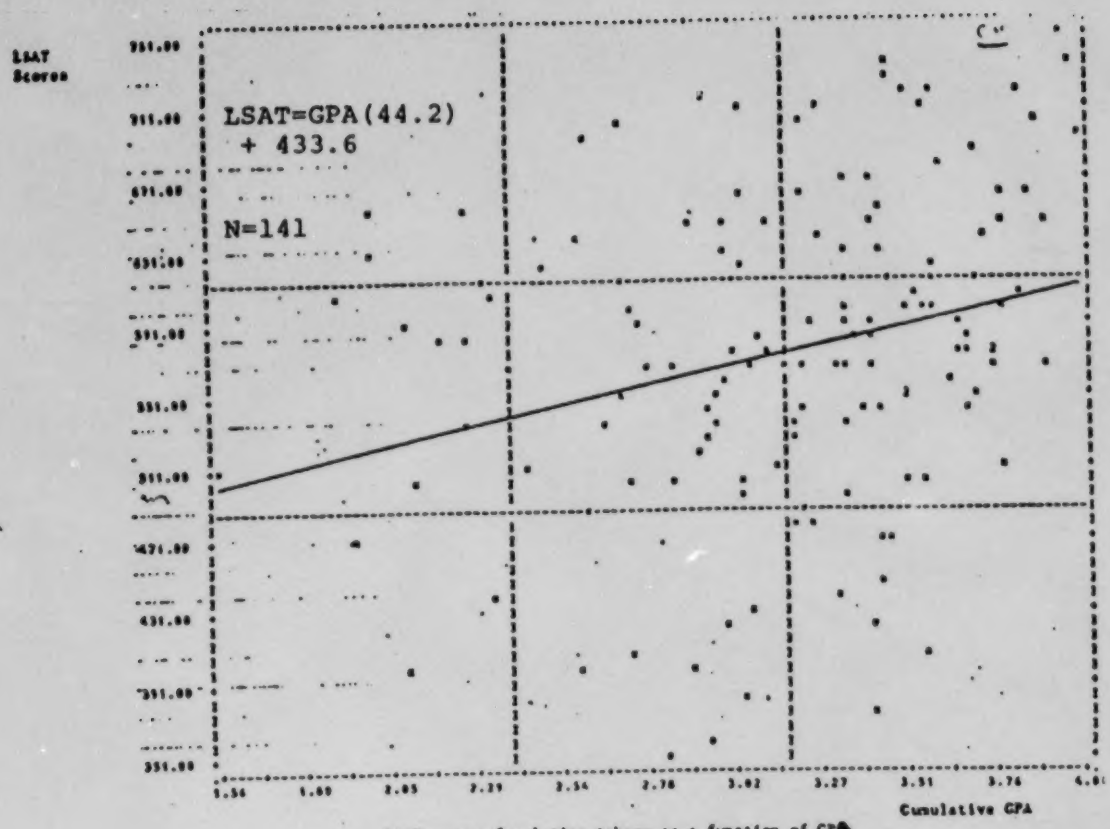
LSAT average scores for 1-time takers as a function of GPA comparing whites coached at 003 with uncoached whites



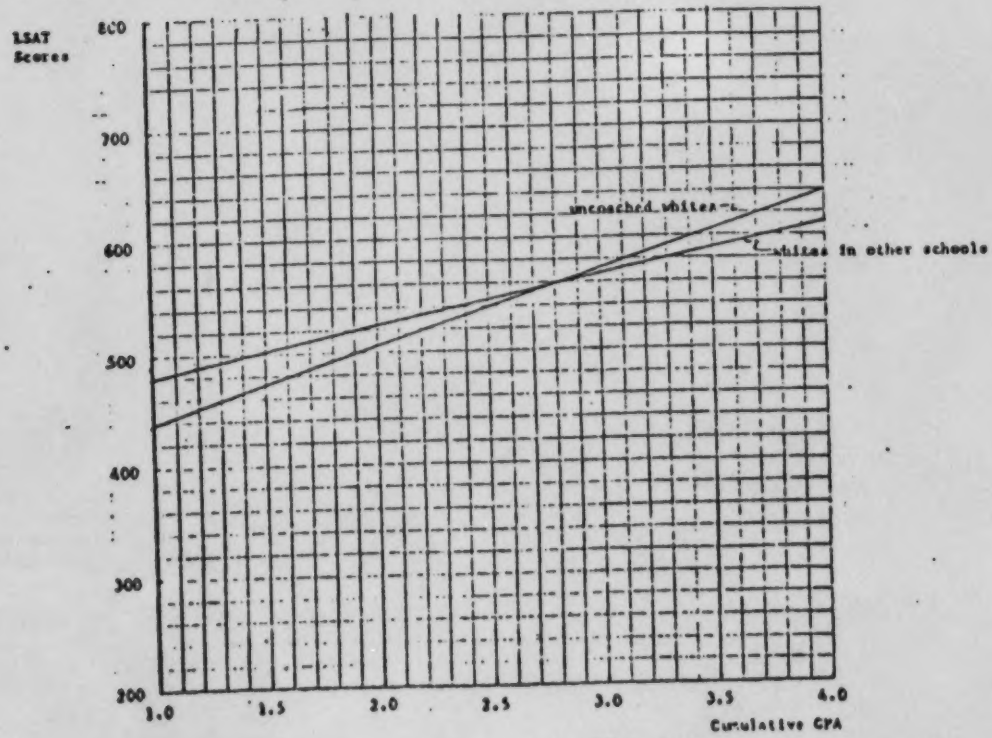
LSAT scores for 1-time takers as a function of GPA for whites coached at 604



LSAT average scores for 1-time takers as a function of GPA, comparing whites coached at 604 with uncoached whites



LSAT scores for 1-time takers as a function of GPA for whites coached in other schools



LSAT average scores for 1-time takers as a function of GPA, comparing whites coached in other schools with uncoached whites

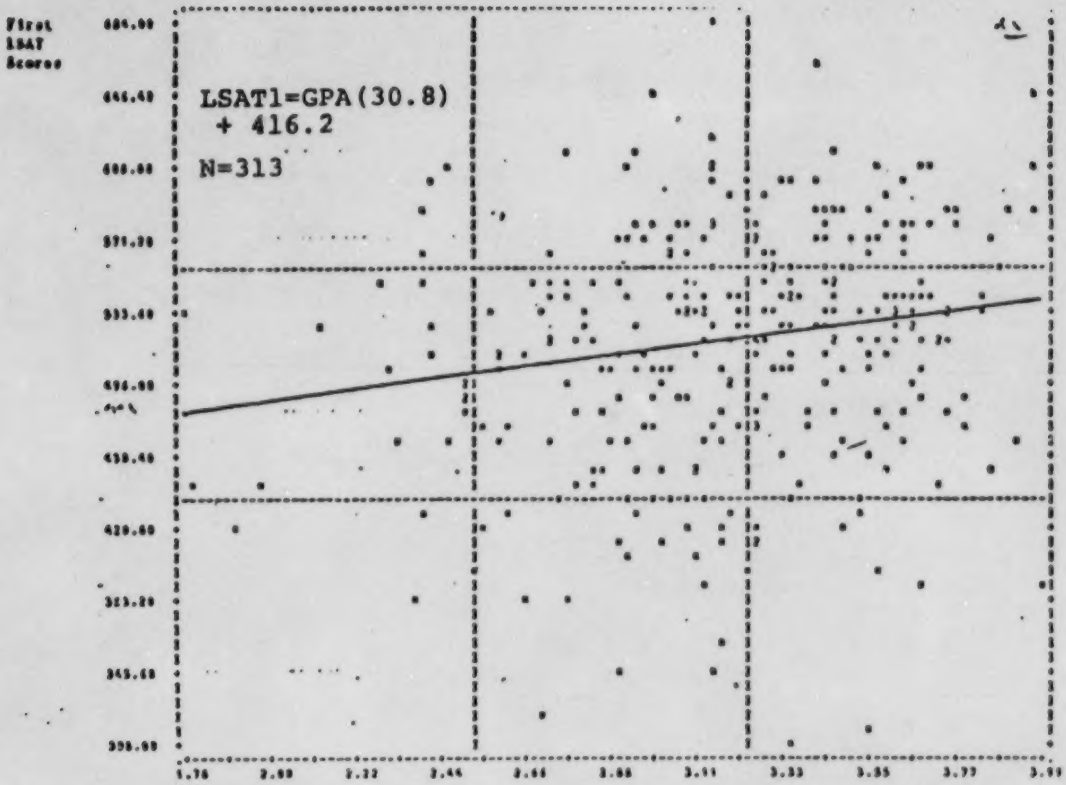
(6) LSAT scores for 2-time takers coached before first exam

This section displays actual first-LSAT and second-LSAT scores for 2-time takers coached before their first LSAT. These scores, together with comparisons between coached and uncoached students, are shown for individual coaching schools. These results suggest that:

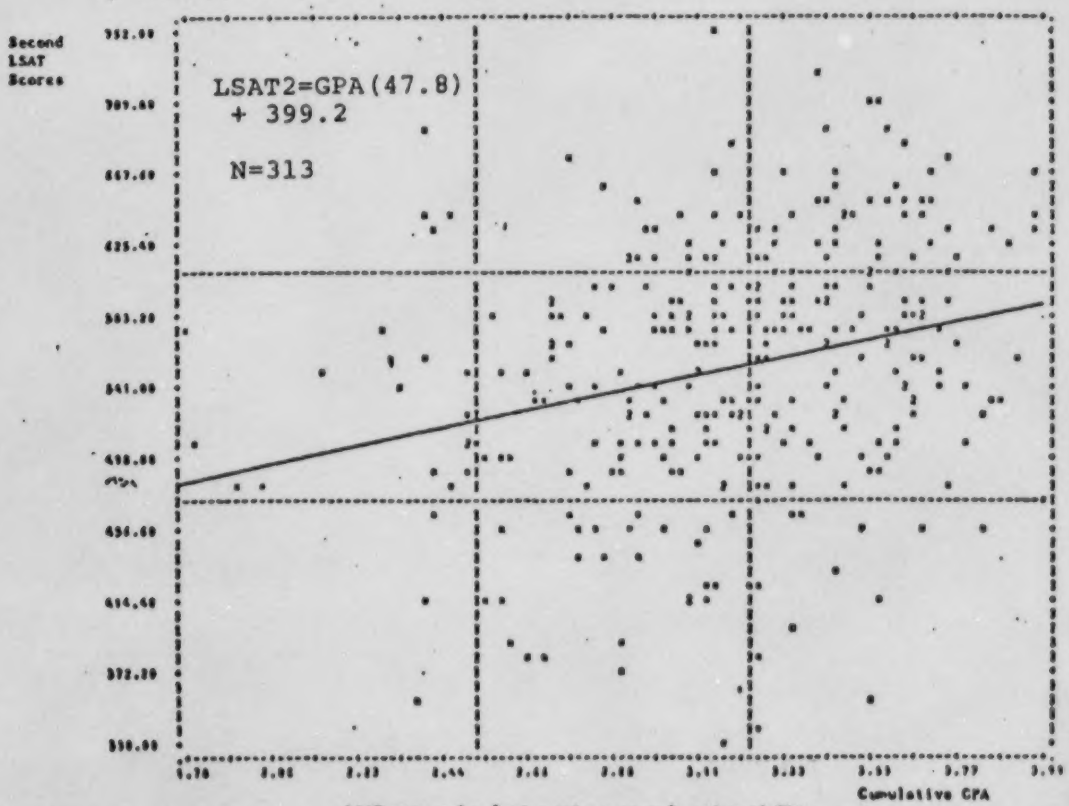
(a) LSAT coaching is primarily effective for low-GPA (white) students;

(b) SHK (001) produces better results than the other schools; and

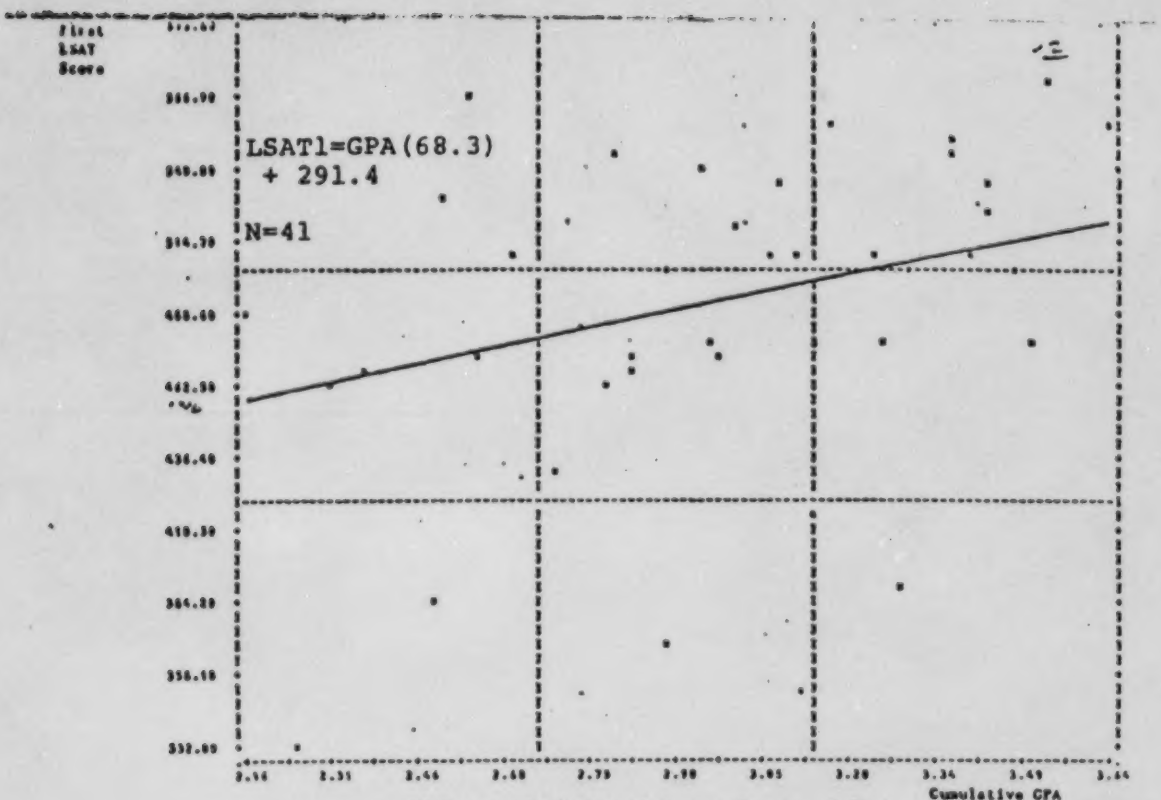
(c) It appears that the benefits of coaching may be somewhat ephemeral; in most cases, the uncoached group improved its relative position on the second LSAT exam.



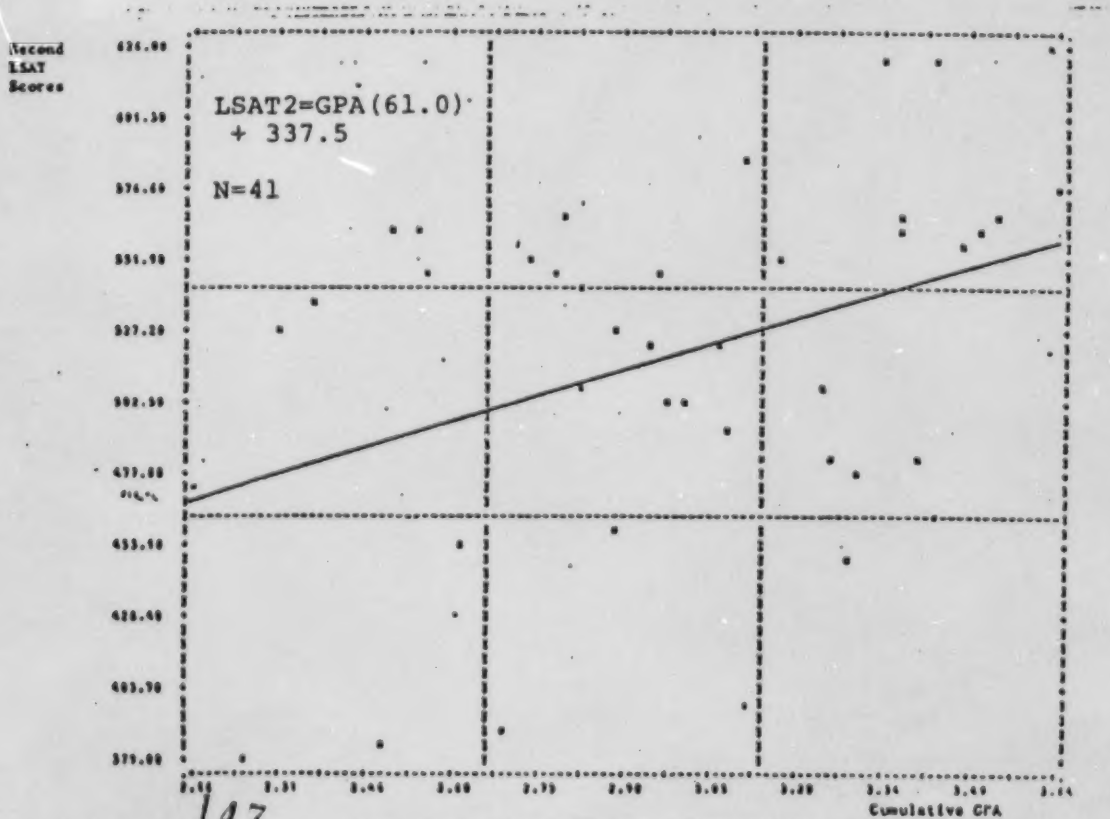
LSAT scores for 2-time takers as a function of GPA, showing first-LSAT scores for whites coached at 001 before their first LSAT



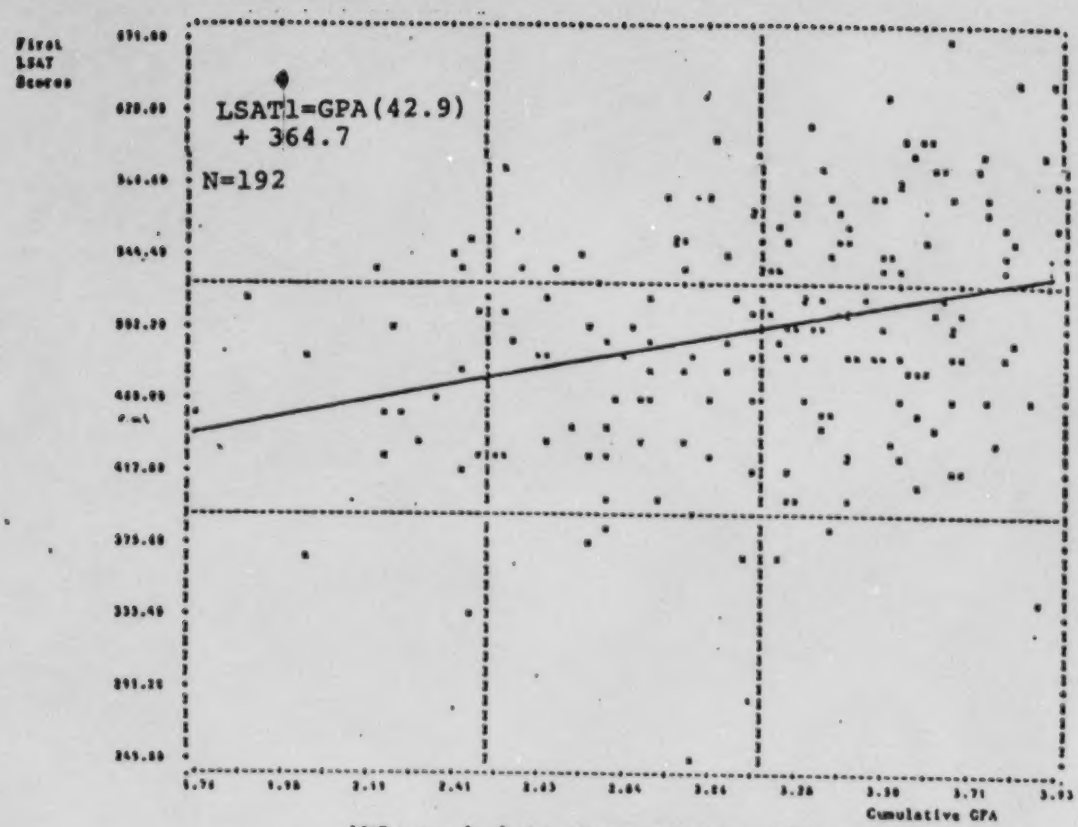
LSAT scores for 2-time takers as a function of GPA, showing second-LSAT scores for whites coached at 001 before their first LSAT



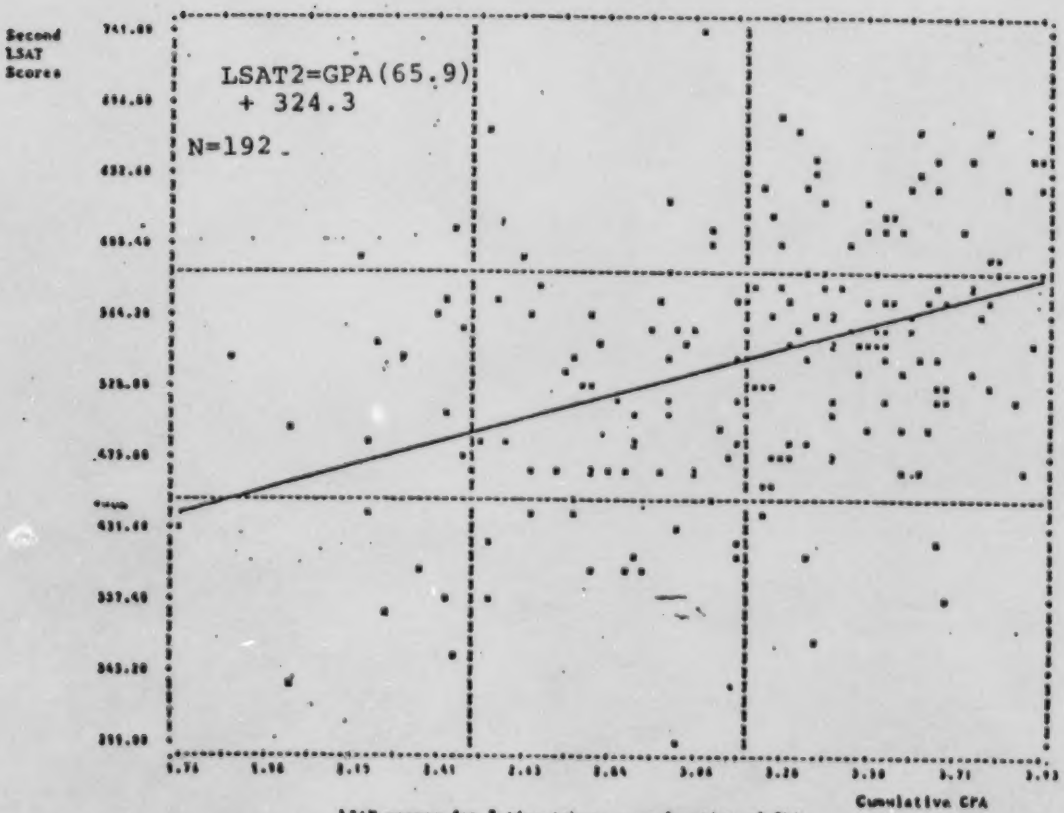
LSAT scores for 2-time takers as a function of GPA showing first-LSAT scores for whites coached at 002 before their first LSAT



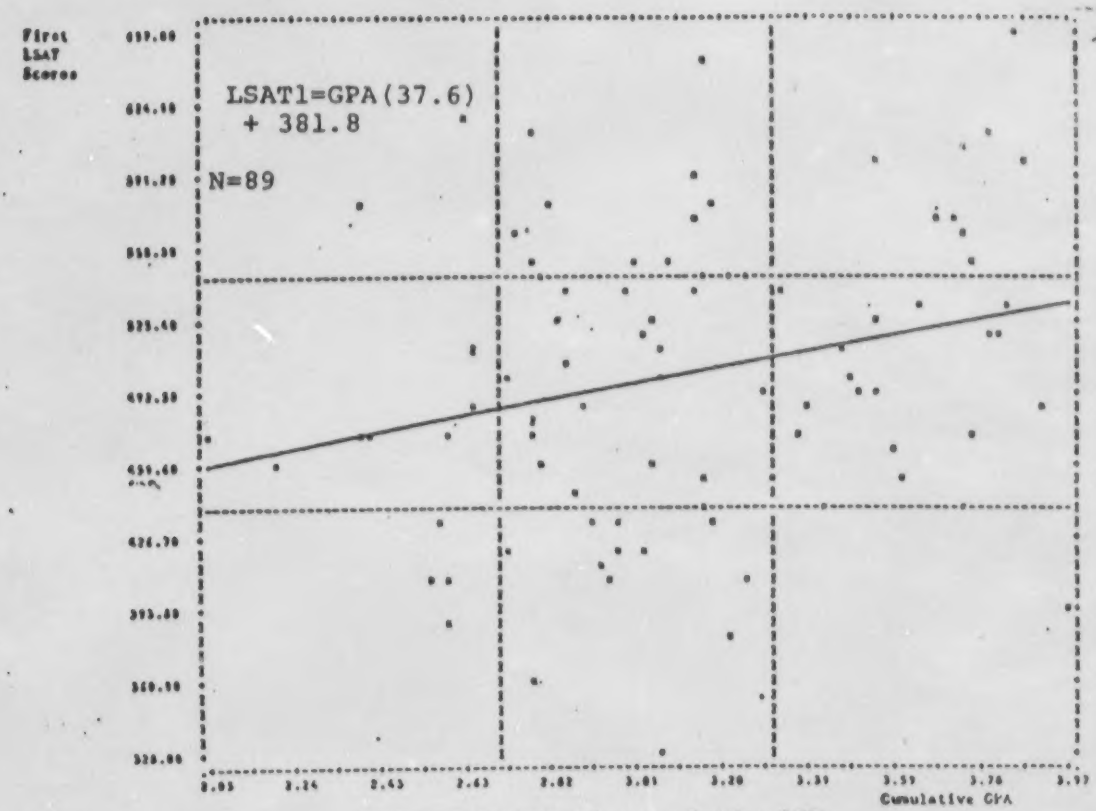
LSAT scores for 2-time takers as a function of GPA, showing second-LSAT scores for whites coached at 002 before their first LSAT



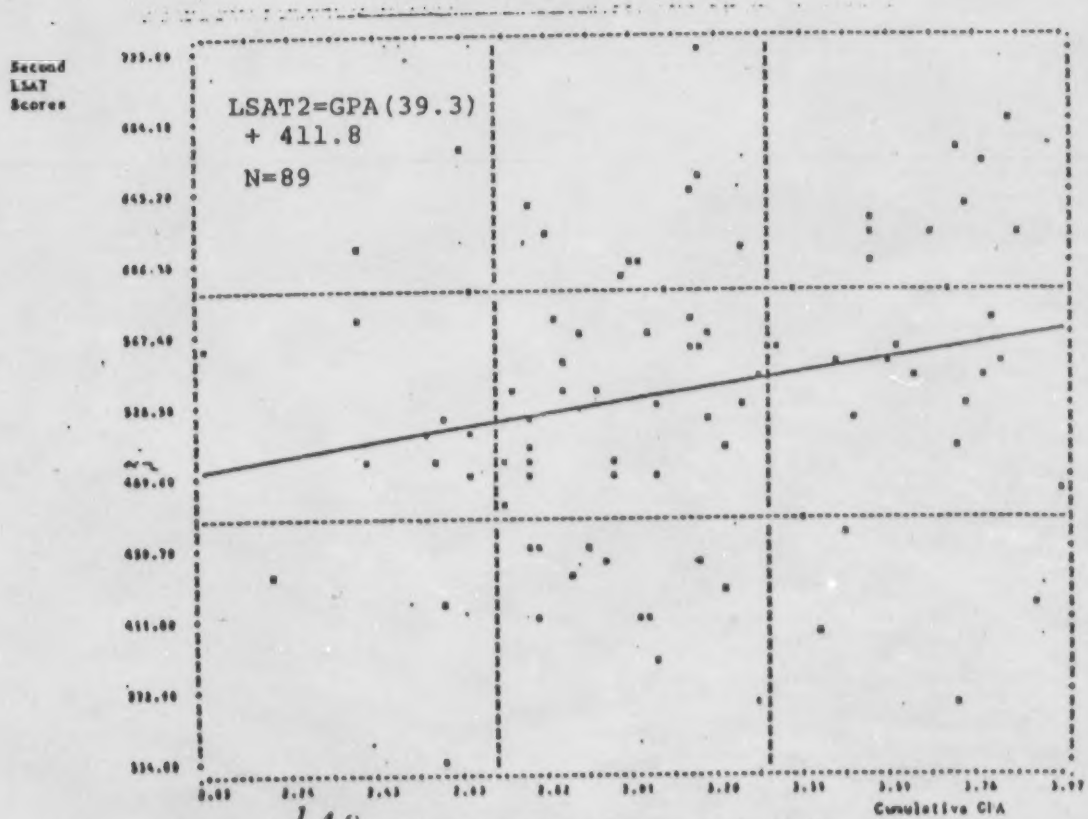
LSAT scores for 2-time takers as a function of GPA, showing first-LSAT scores for whites coached at OOJ before their first LSAT



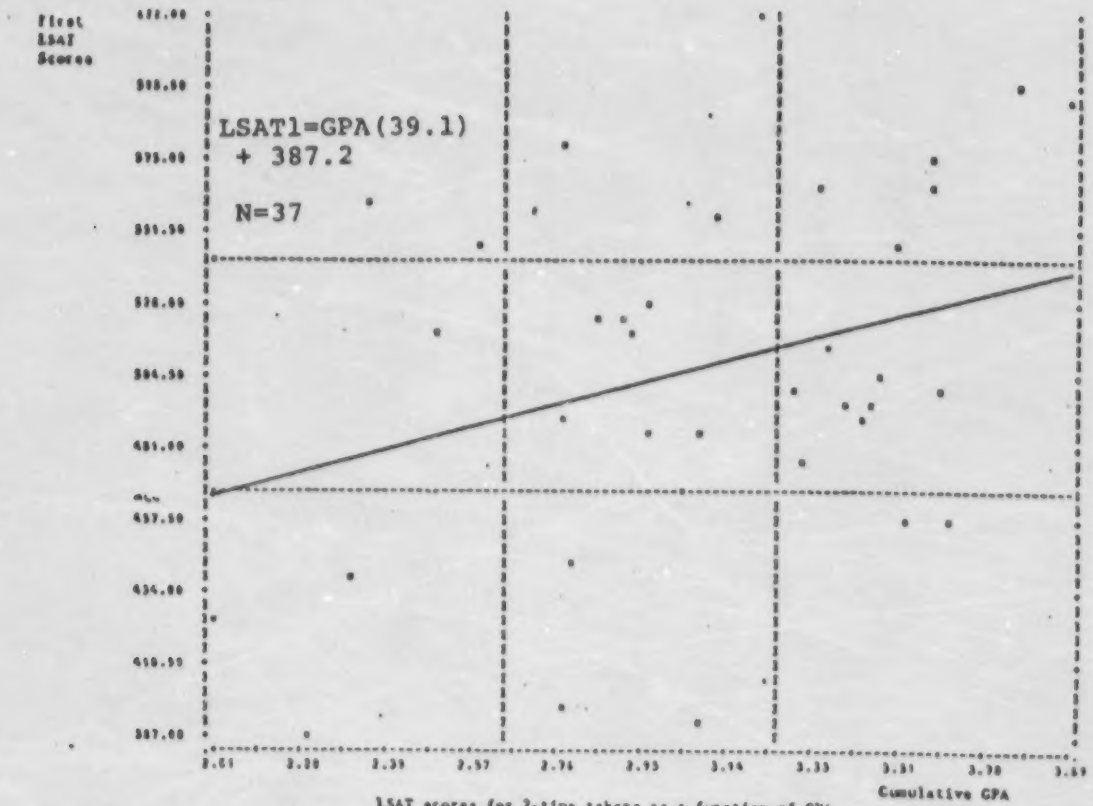
LSAT scores for 2-time takers as a function of GPA, showing second-LSAT scores for whites coached at OOJ before their first LSAT



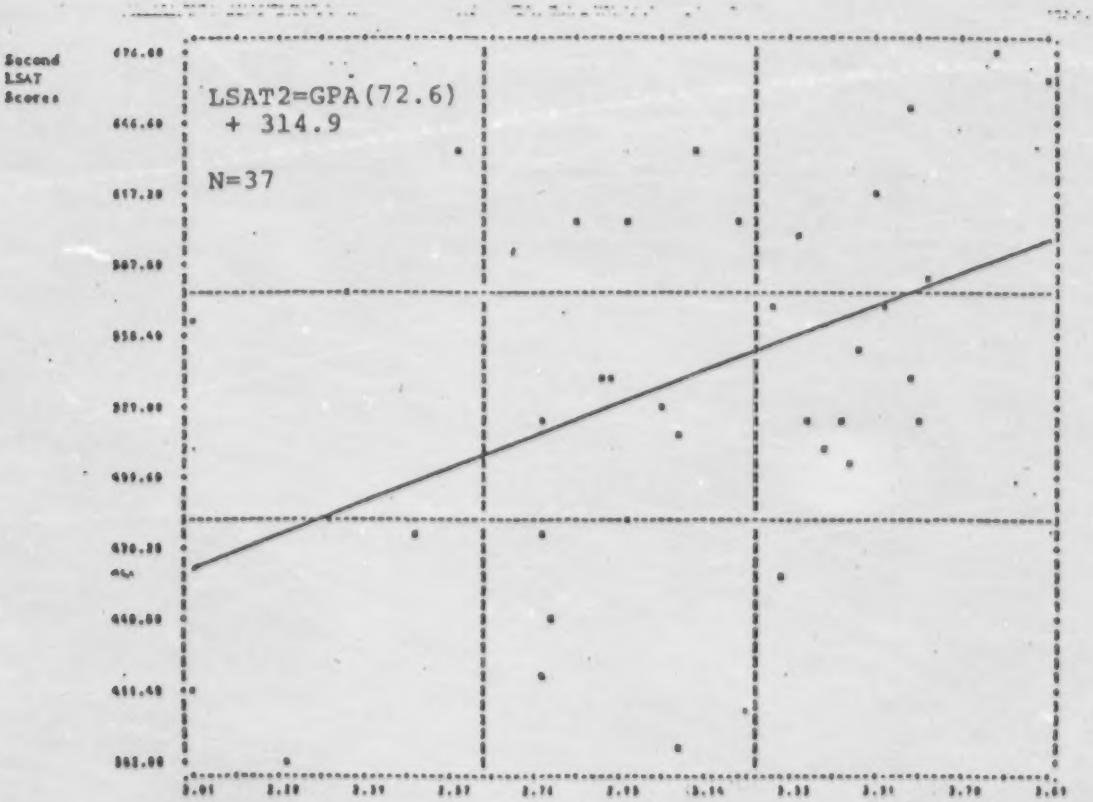
LSAT scores for 2-time takers as a function of GPA, showing first-LSAT scores for whites coached at UOA before their first LSAT



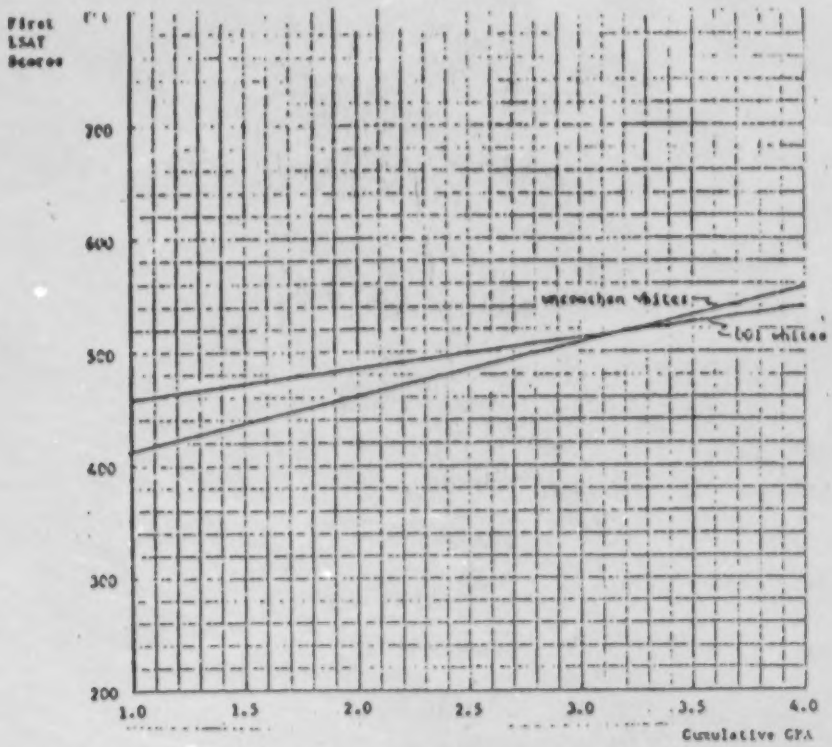
149 LSAT scores for 2-time takers as a function of GPA, showing second-LSAT scores for whites coached at UOA



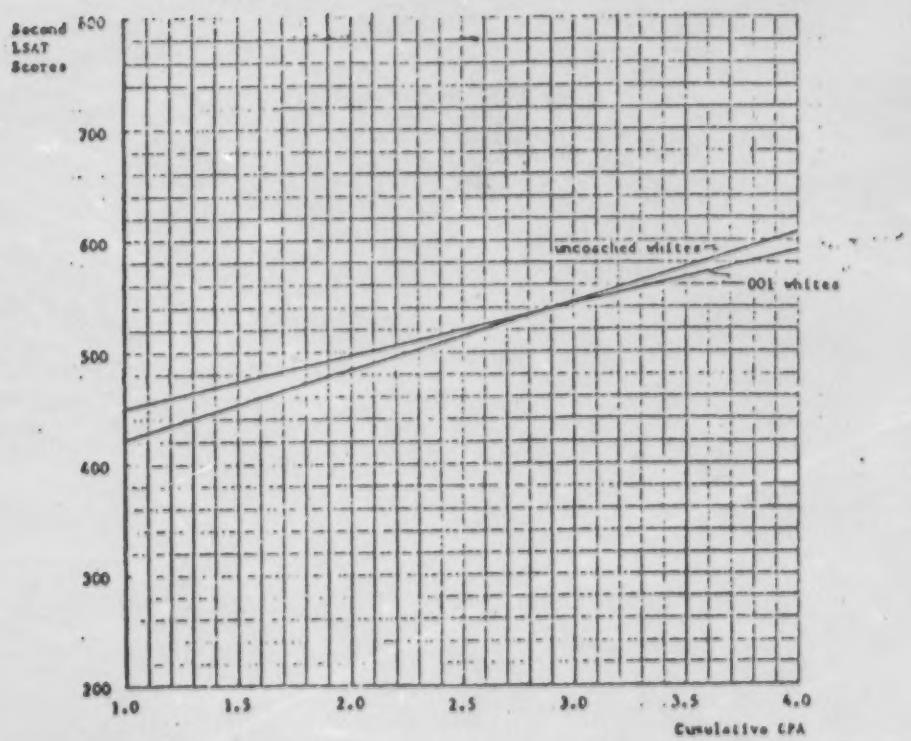
LSAT scores for 2-time takers as a function of GPA, showing first-LSAT scores for whites coached at other schools before their first LSAT



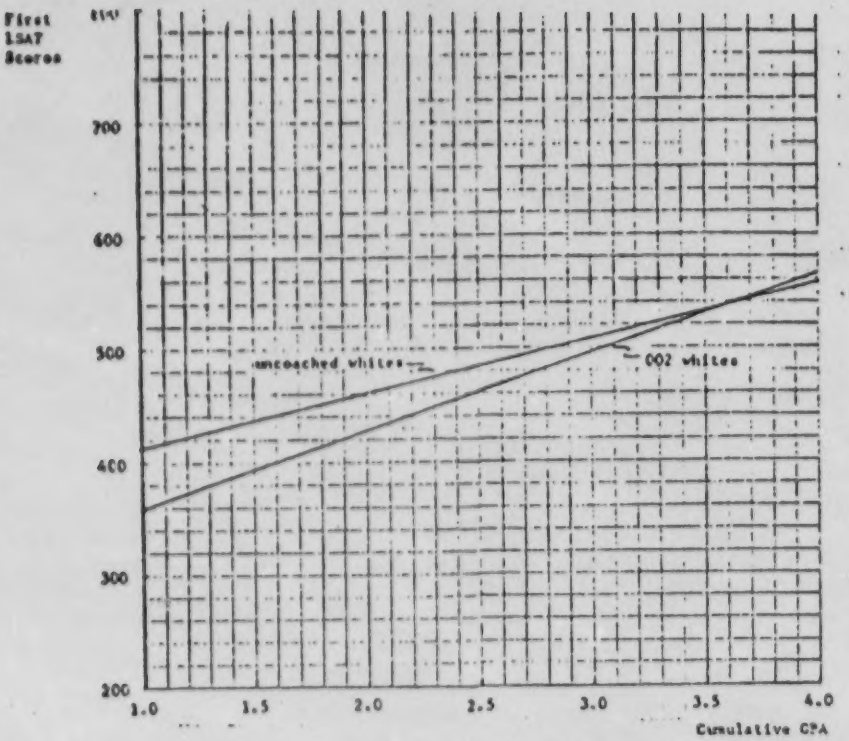
LSAT scores for 2-time takers as a function of GPA, showing second-LSAT scores for whites coached at other schools before their first LSAT



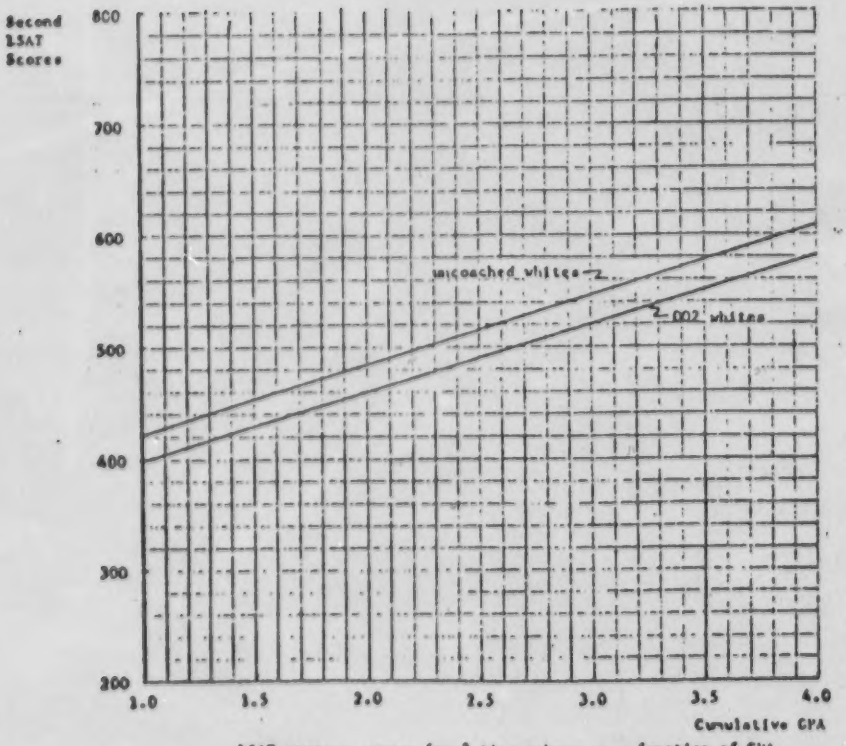
LSAT average scores for 2-time takers as a function of GPA, showing first-LSAT scores and comparing whites coached at 001 before their first LSAT against uncoached whites



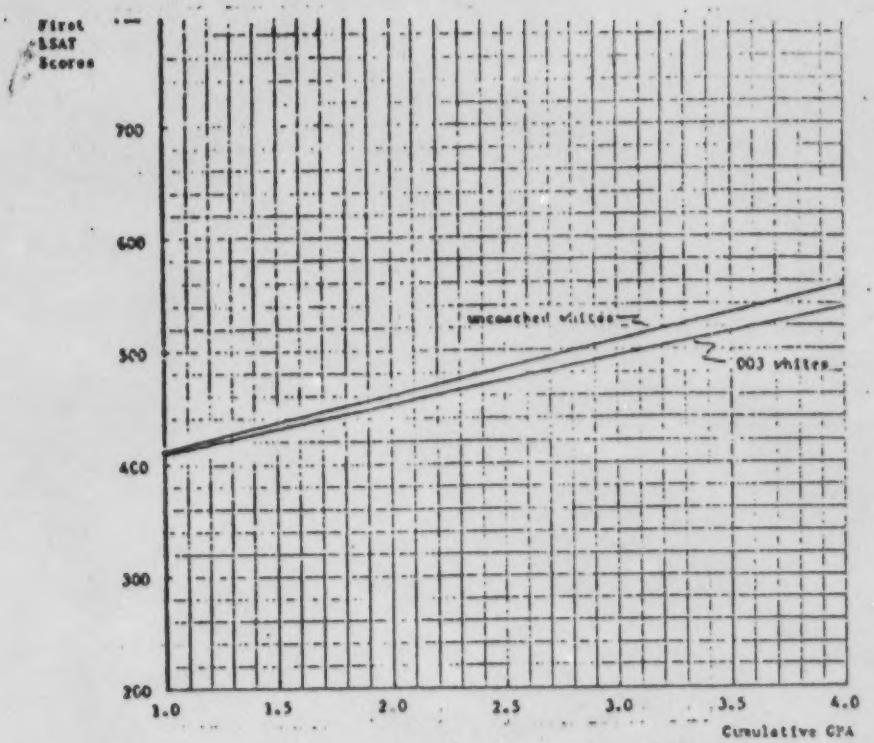
151 LSAT average scores for 2-time takers as a function of GPA, showing second-LSAT scores and comparing whites coached at 001 before their first LSAT against uncoached whites



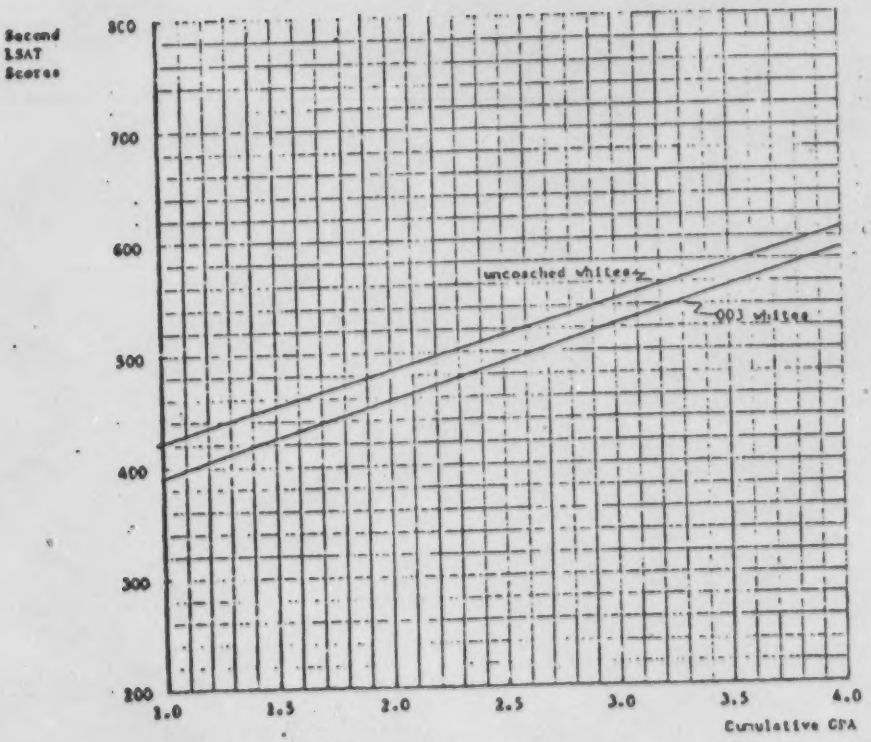
LSAT average scores for 2-time takers as a function of GPA, showing first-LSAT scores and comparing whites coached at 002 before their first LSAT against uncoached whites



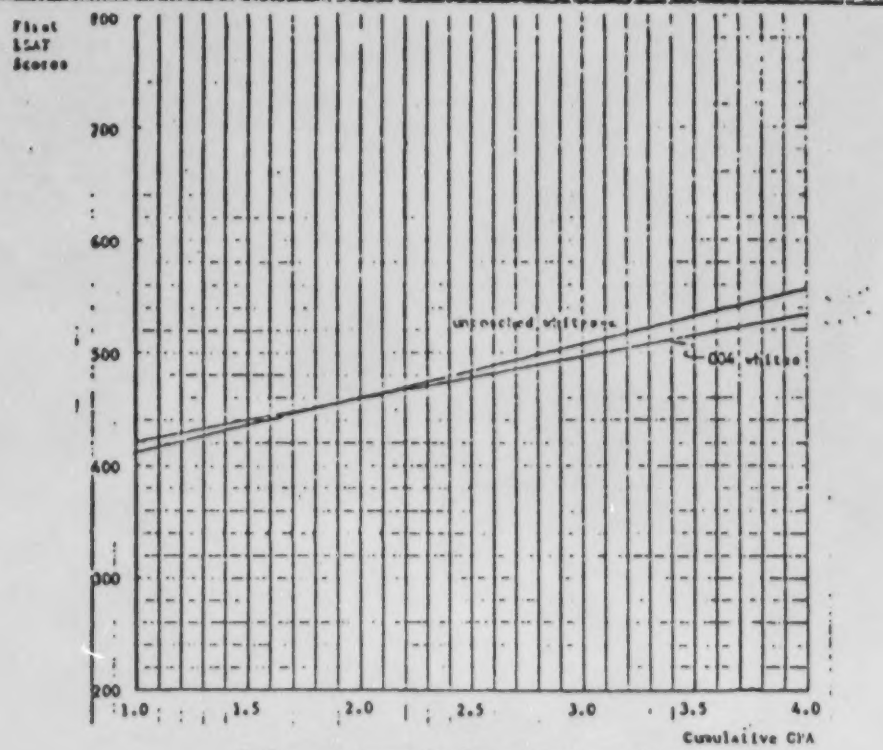
LSAT average scores for 2-time takers as a function of GPA, showing second-LSAT scores and comparing whites coached at 002 before their first LSAT against uncoached whites



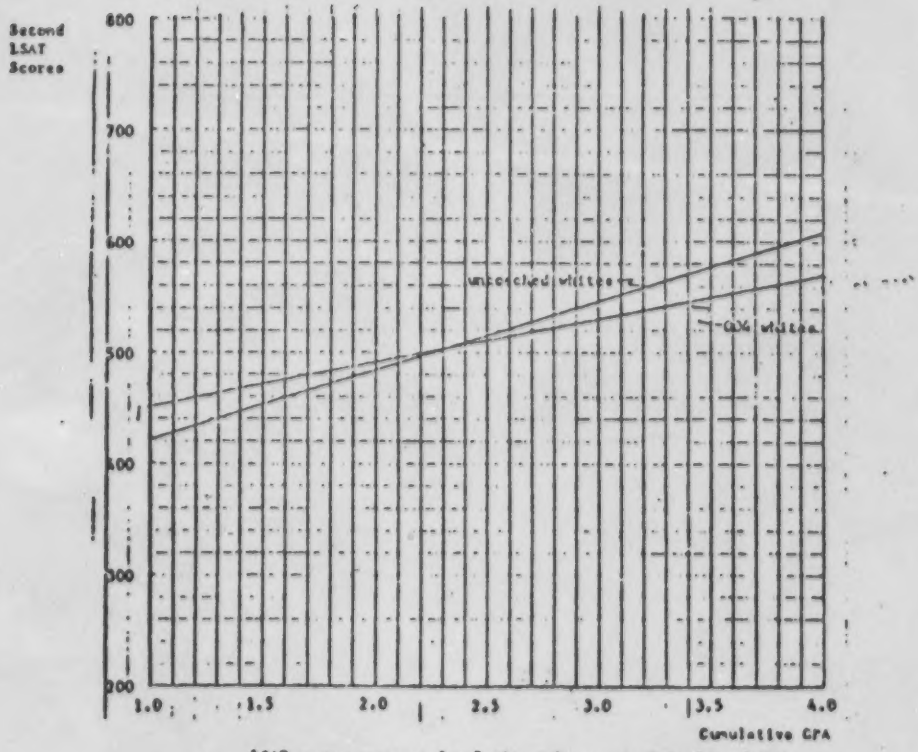
LSAT average scores for 2-time takers as a function of GPA, showing first-LSAT scores and comparing whites coached at 003 before their first LSAT against uncoached whites



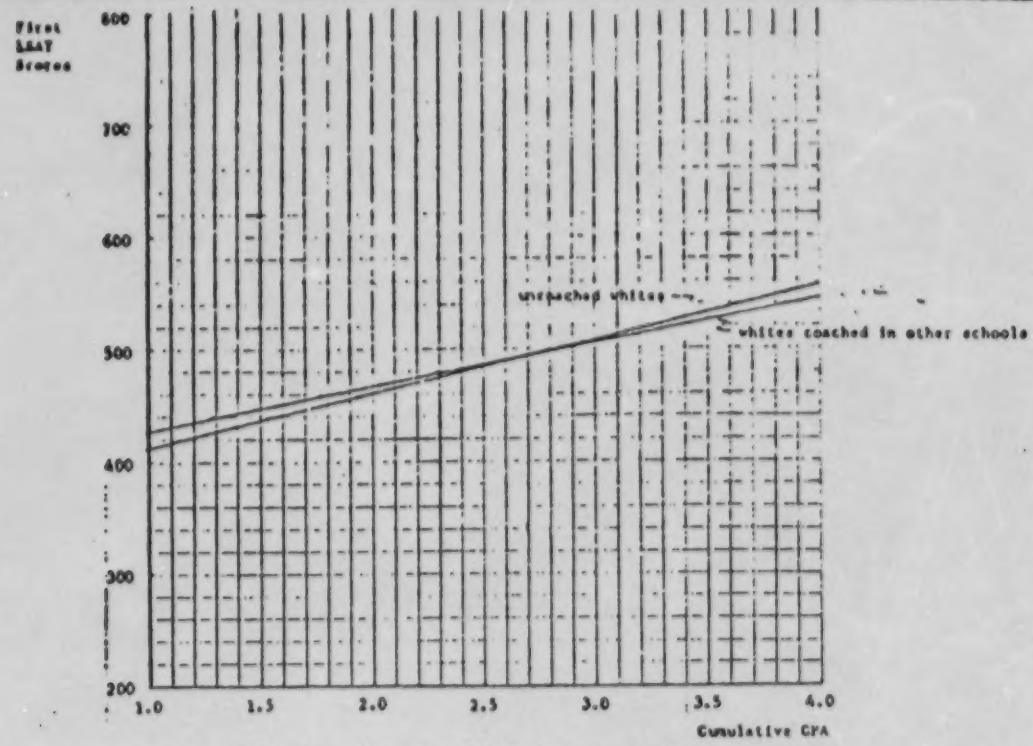
LSAT average scores for 2-time takers as a function of GPA, showing their second-LSAT scores and comparing whites coached at 003 before their first LSAT against uncoached whites



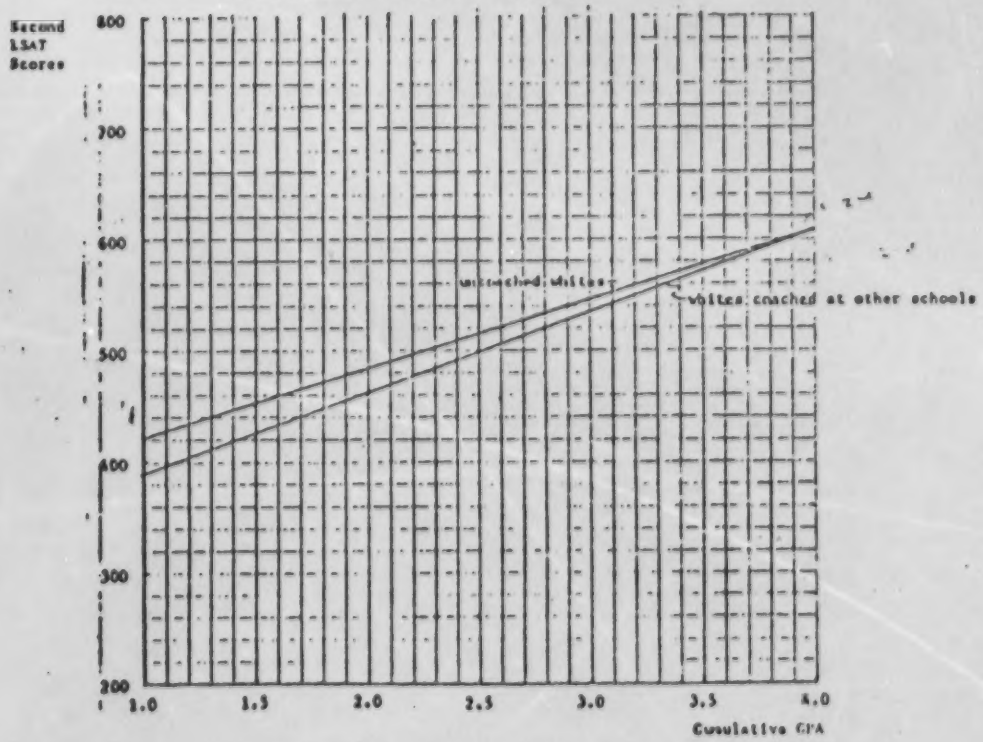
LSAT average scores for 2-time takers as a function of GPA, showing first-LSAT scores and comparing whites coached at 004 before their first LSAT against uncoached whites



LSAT average scores for 2-time takers as a function of GPA, showing second-LSAT scores and comparing whites coached at 004 before their first LSAT against uncoached whites



LSAT average scores for 2-time takers as a function of GPA, showing first-LSAT scores and comparing whites coached at other schools before their first LSAT against uncoached whites



LSAT average scores for 2-time takers as a function of GPA, showing second-LSAT scores and comparing whites coached at other schools before their first LSAT against uncoached whites

(7) LSAT scores for 2-time takers coached between exams

This section displays first-LSAT and second-LSAT scores for white 2-time takers coached between exams. Comparison of average LSAT scores for coached and uncoached students reveals the following:

(a) Amity (002) appears to offer the greatest benefit for high-GPA students, whereas the other schools seem to be marginally effective with Sexton (003) showing a score decrease.

(b) Evergreen (004) appears to be ineffective for low scoring GPA students whereas all the other schools appear to be extremely effective.

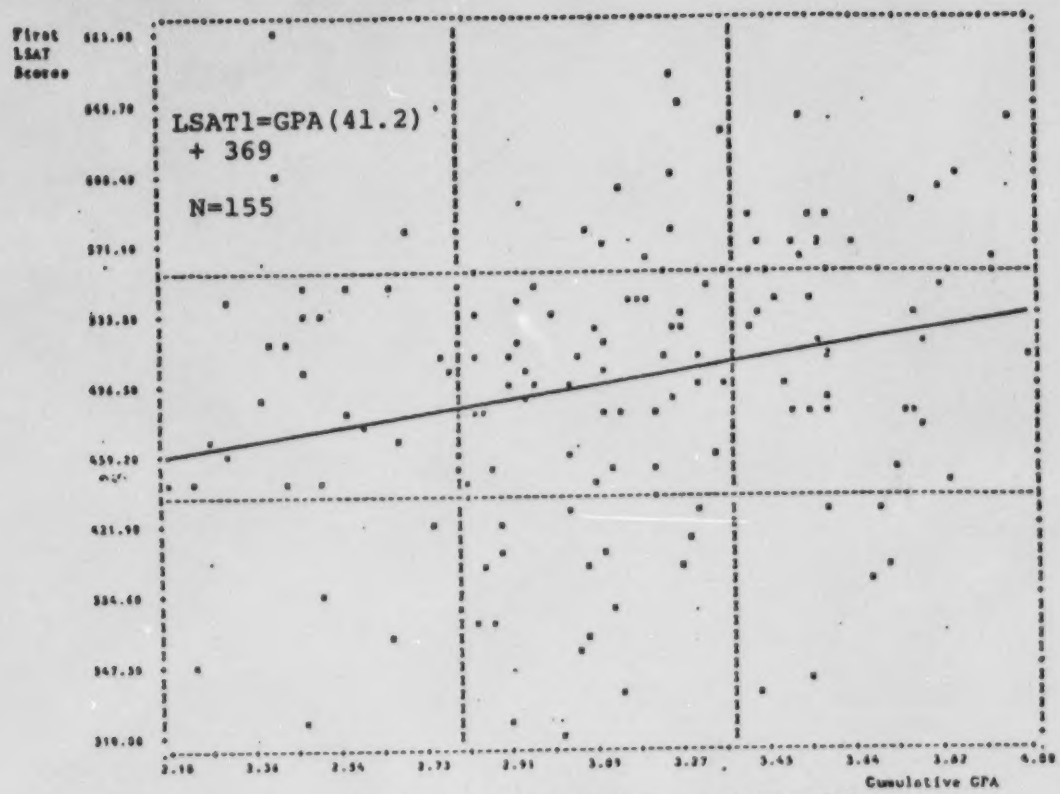
The following is a table of first and second LSAT scores as a function of GPA at the 1.0 and 4.0 levels for the coaching schools we have analyzed. The uncoached group is also included:

		GPA	
		1.0	4.0
001	LSAT1	410	534
	LSAT2	464	586
002	LSAT1	302	580
	LSAT2	364	645
003	LSAT1	467	524
	LSAT2	502	568
004	LSAT1	417	515
	LSAT2	414	569
Others	LSAT1	354	536
	LSAT2	402	591
Control	LSAT1	412	556
(Uncoached)	LSAT2	421	605

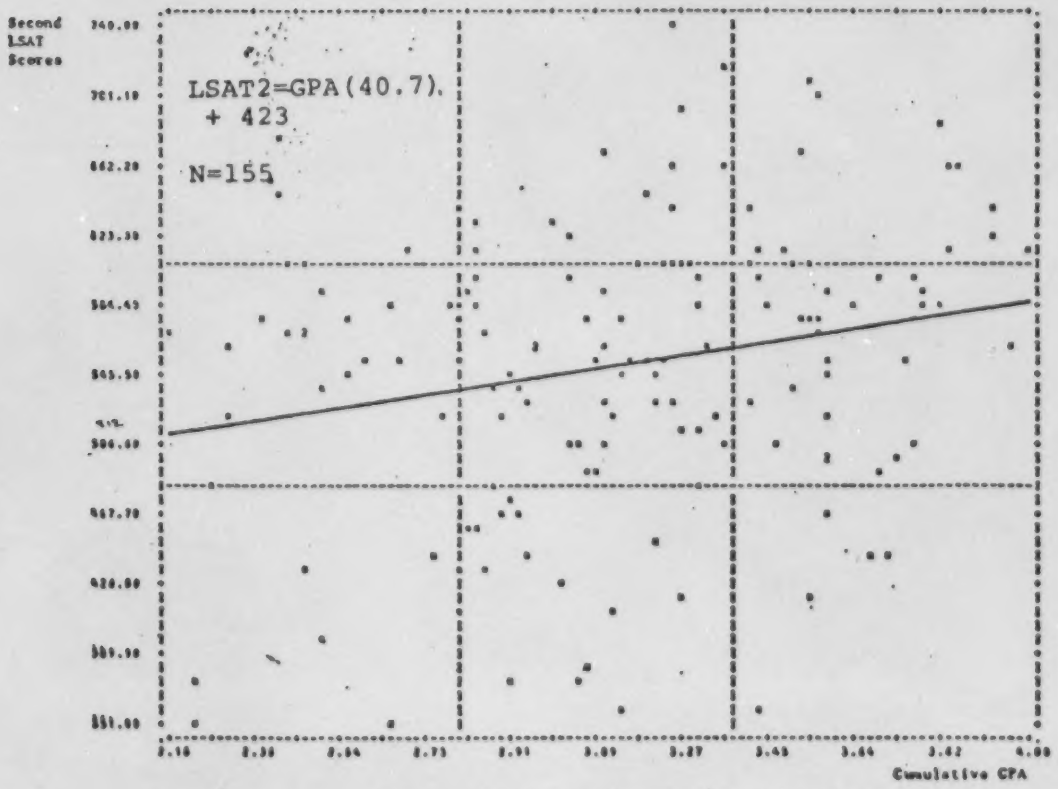
The composite group of small coaching schools shows gross average conditional LSAT increases of 55 points at the 4.0 GPA level, Amity (002) shows a gross average conditional

increase of 65 points. The corresponding control group shows increases of 49 points indicating a net benefit of 6 LSAT points at the 4.0 GPA level for the composite group of schools and a net benefit of 16 points for Amity (002) students. Although these increases are small compared with the dramatic increases reflected in SAT scores part of the apparent minimal effect is accounted for by the extraordinarily large increases in the control groups.

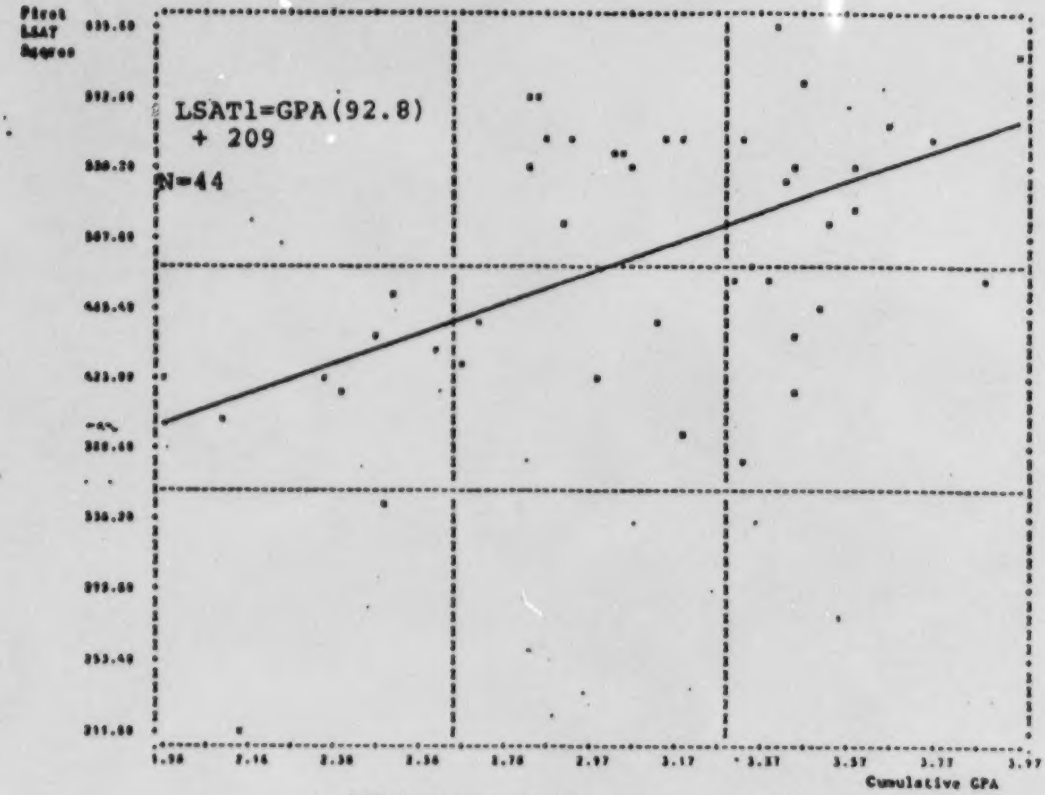
At the 1.0 GPA level Amity (002) shows score increases of 62 points, SHK (001) shows score increases of 54 points and the control group shows average conditional score increases of 9 points, indicating a net benefit of 53 score points for Amity (002) students at the 1.0 GPA level, and a net benefit of 45 LSAT points for SHK (001) students at the 1.0 GPA level.



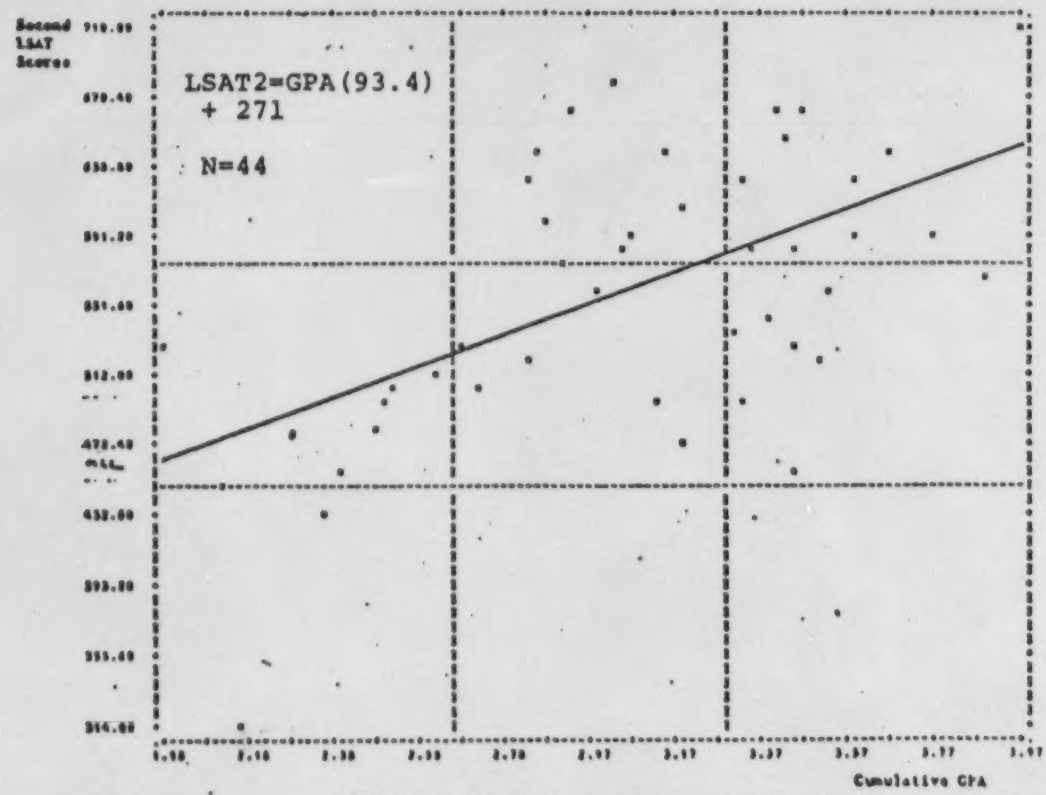
LSAT first scores for 2-time takers as a function of GPA
for whites coached at COI between exams



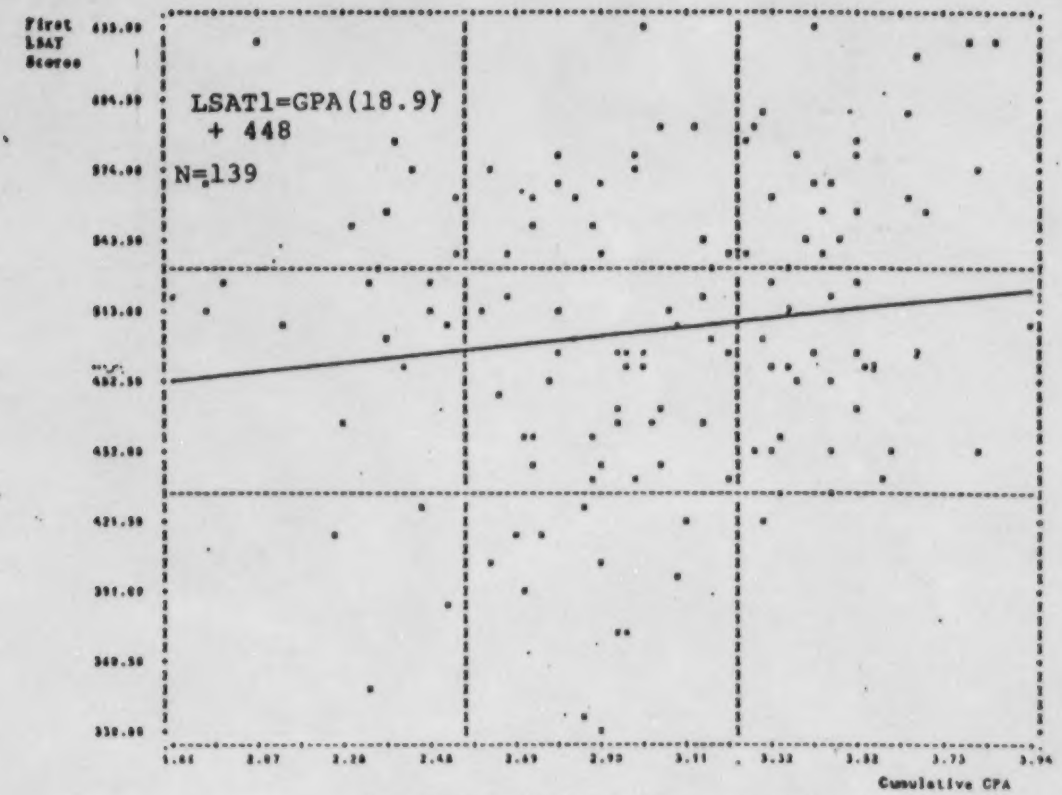
LSAT second scores for 2-time takers as a function of GPA
for whites coached at COI between exams



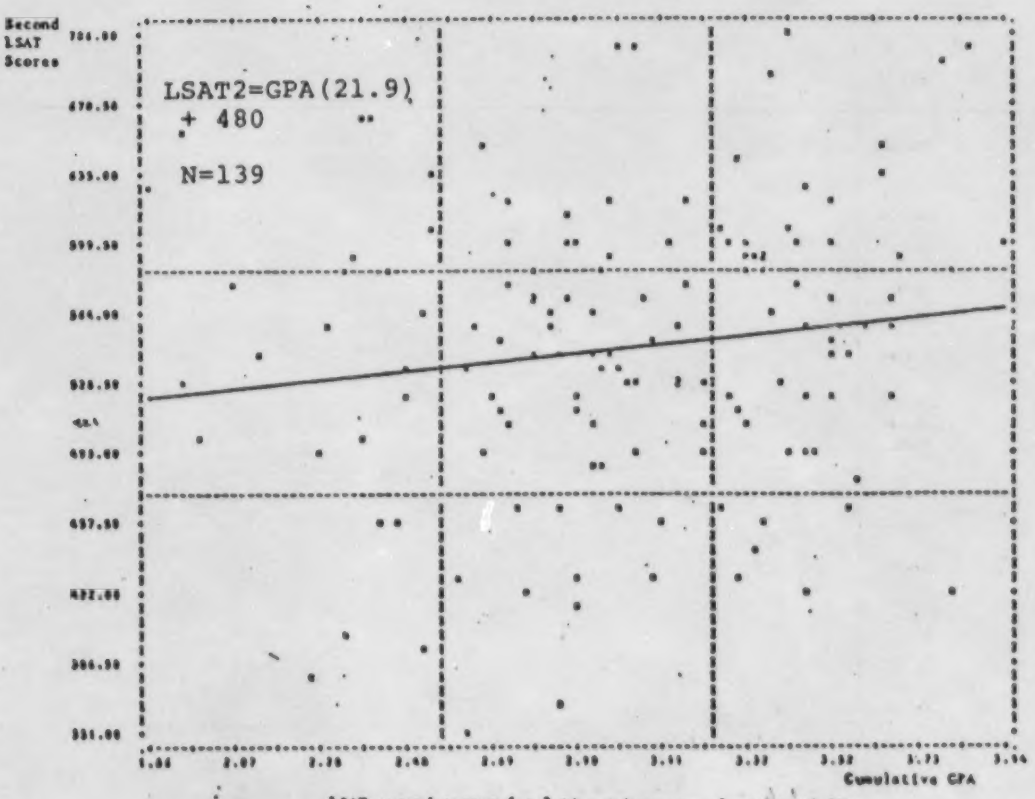
LSAT first scores for 2-time takers as a function of GPA
for whites coached at 602 between exams



LSAT second scores for 2-time takers as a function of GPA
for whites coached at 602 between exams

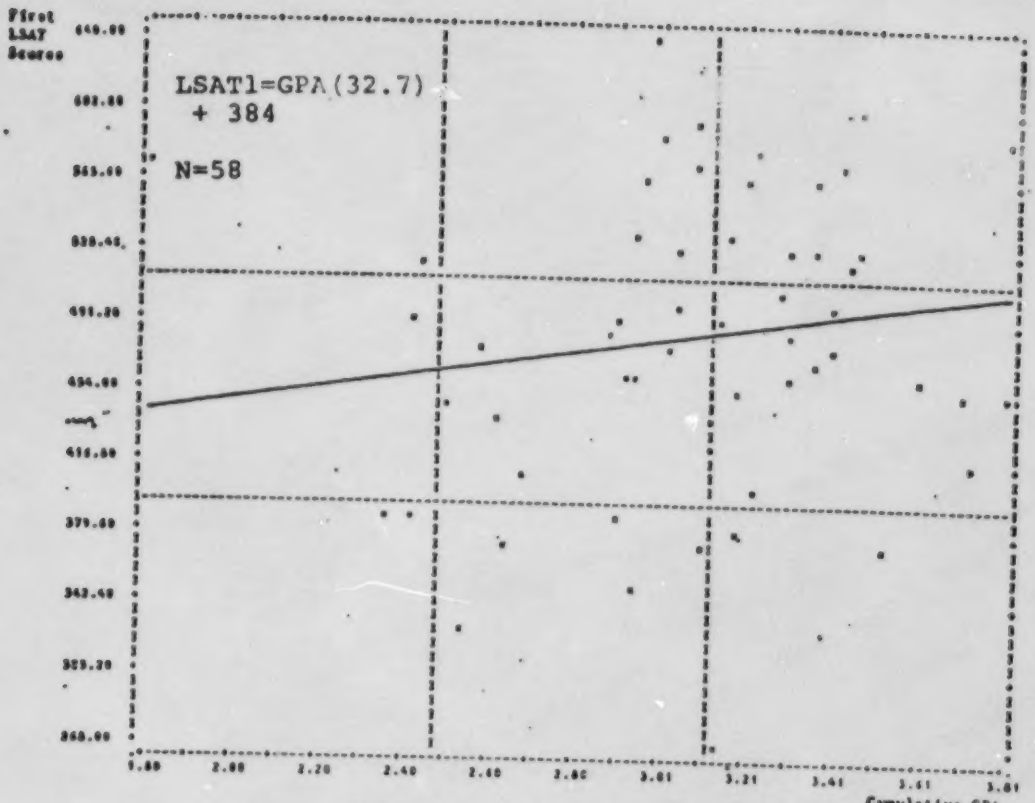


LSAT first scores for 2-time takers as a function of GPA
for whites coached at 003 between exams

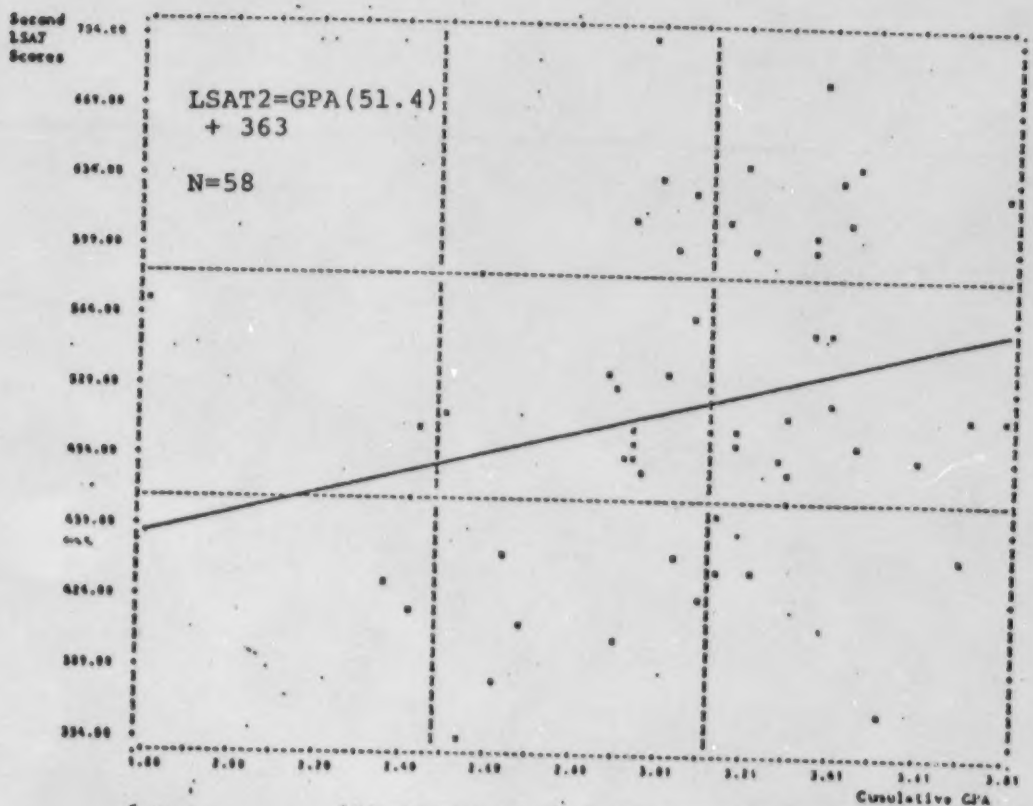


LSAT second scores for 2-time takers as a function of GPA
for whites coached at 003 between exams

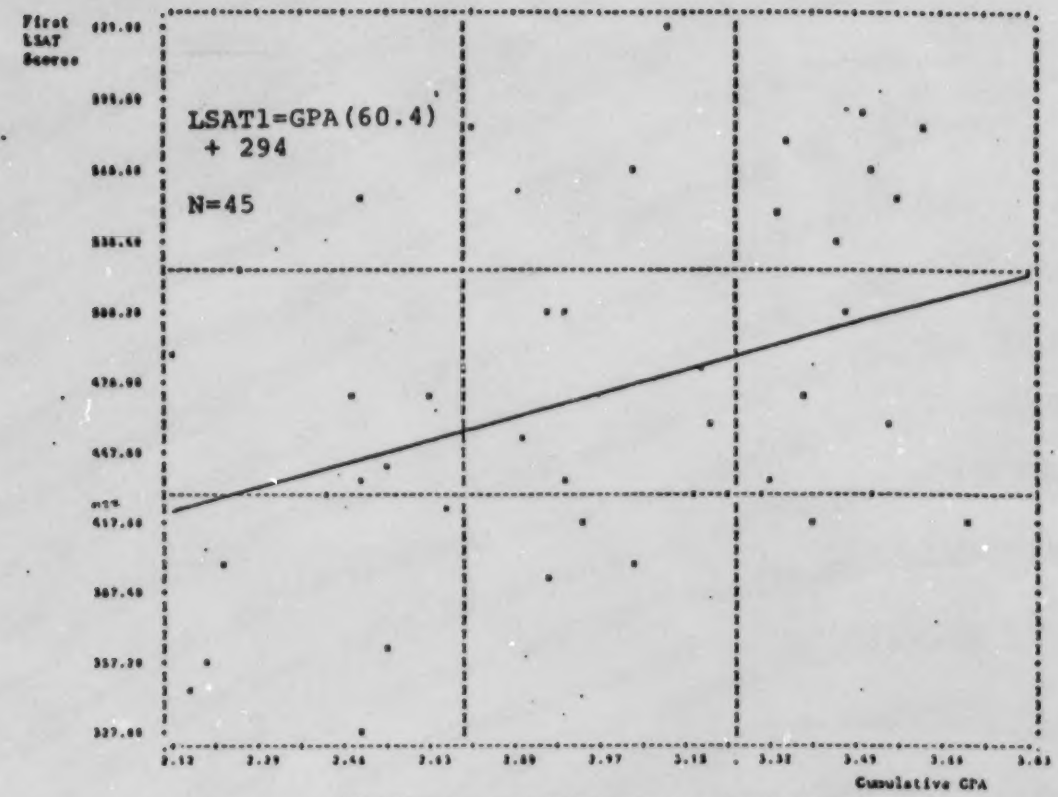
160



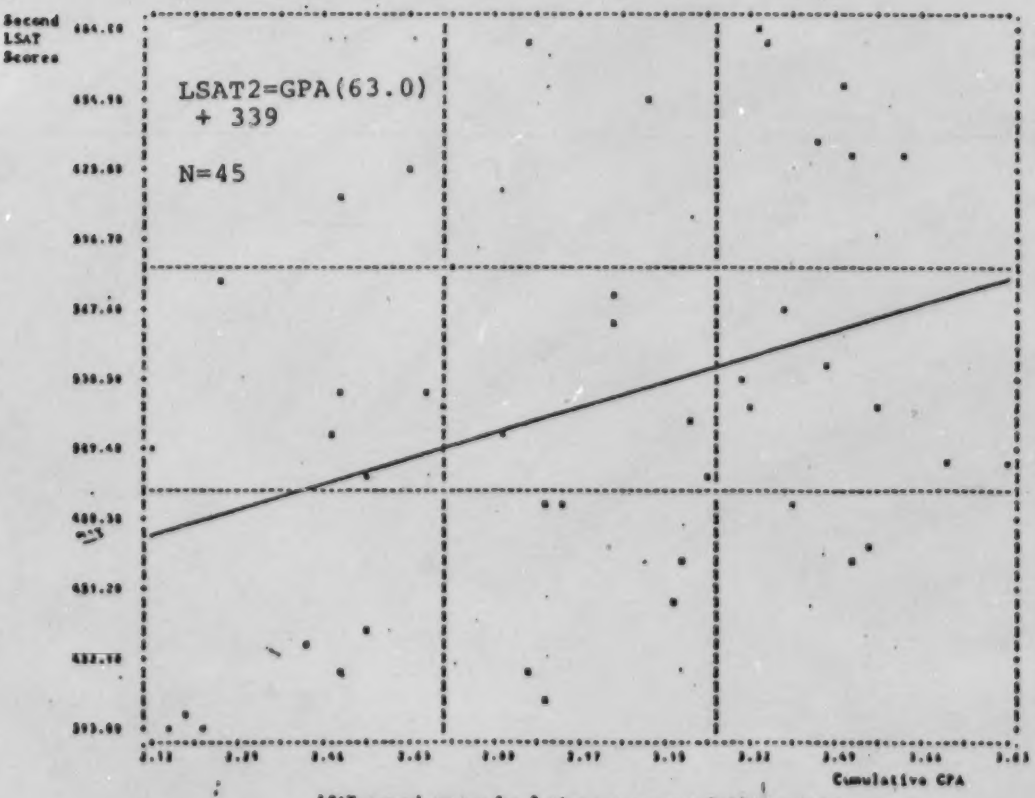
LSAT first scores for 2-time takers as a function of GPA for whites coached at 004 between exams



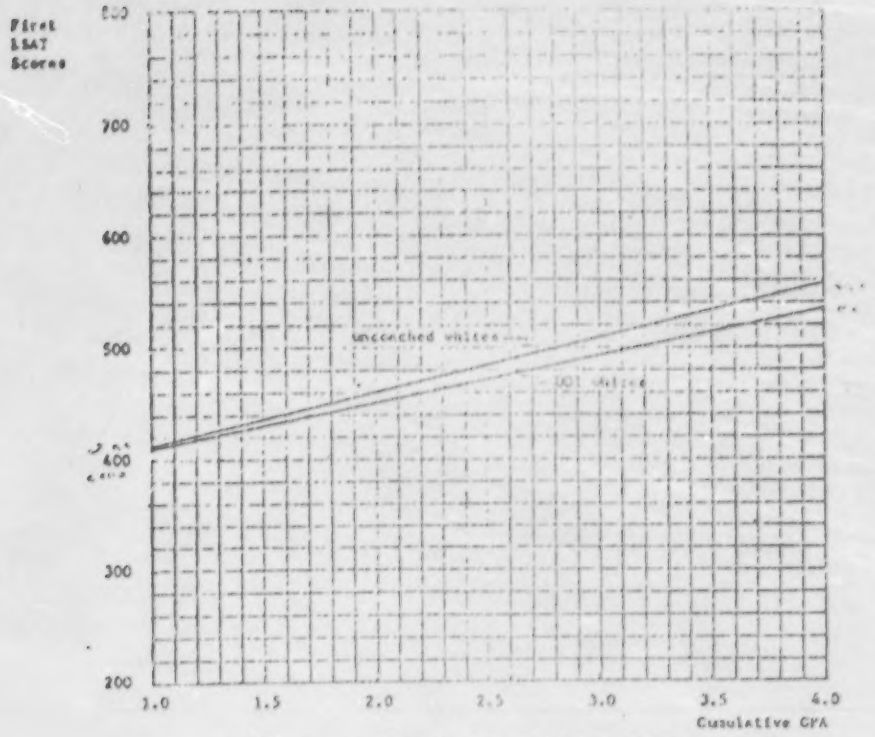
LSAT second scores for 2-time takers as a function of GPA for whites coached at 004 between exams



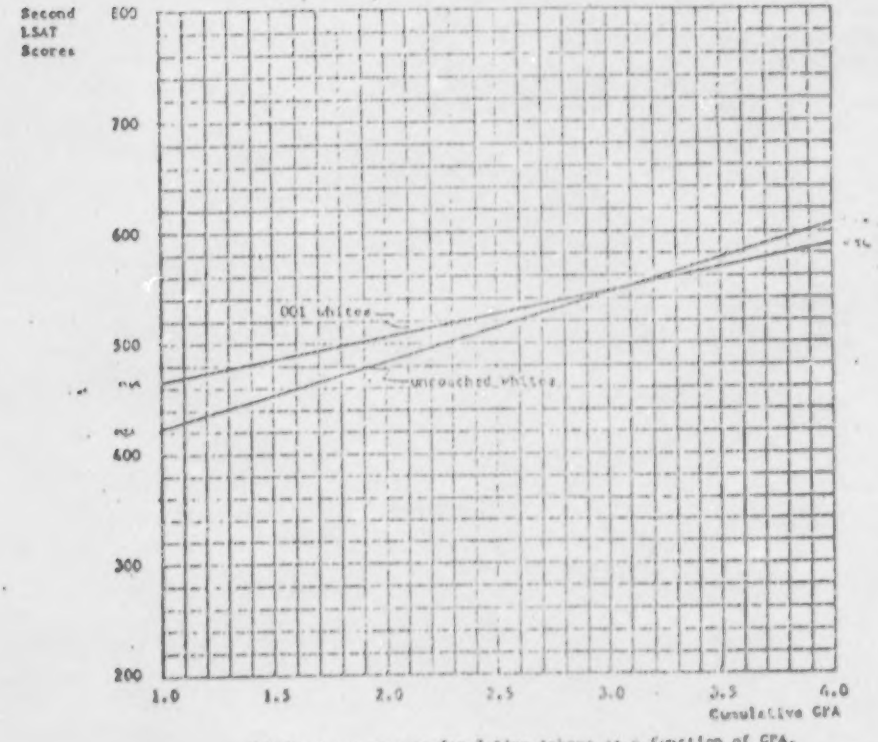
LSAT first scores for 2-time takers as a function of GPA
for whites coached at other schools between exams



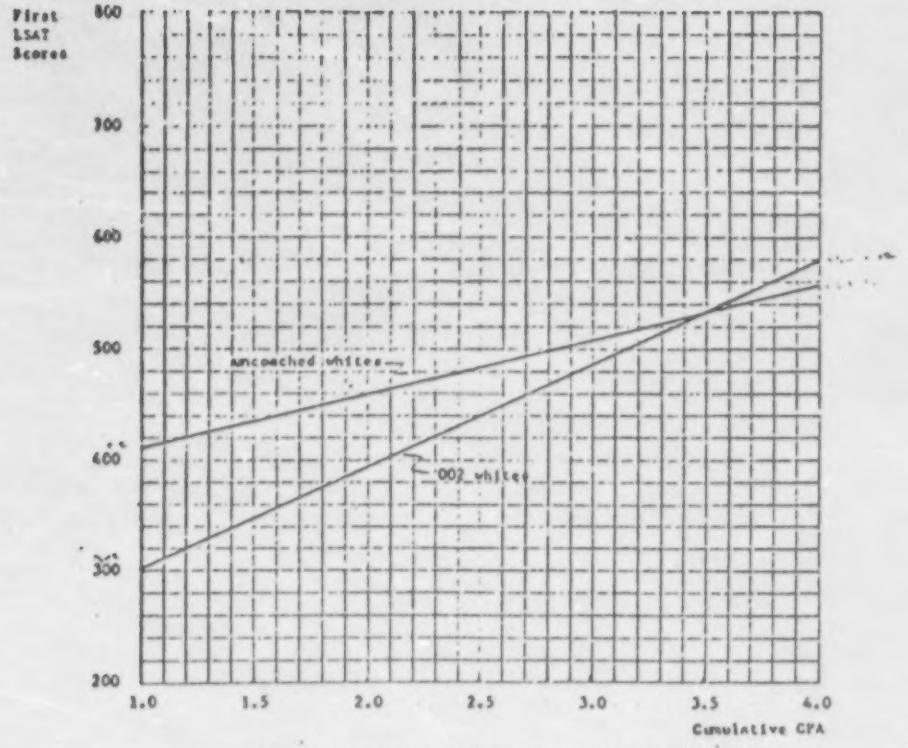
LSAT second scores for 2-time takers as a function of GPA
for whites coached at other schools between exams



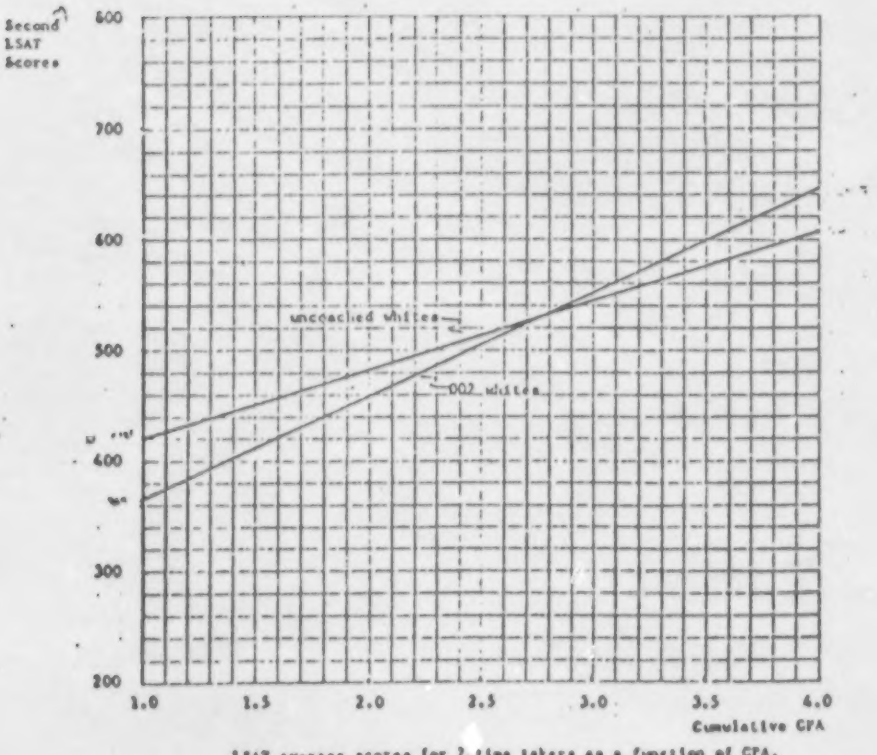
LSAT average scores for 2-time takers as a function of GPA, comparing first-LSAT scores for whites coached at 001 between [illegible] against first-LSAT scores for uncoached whites



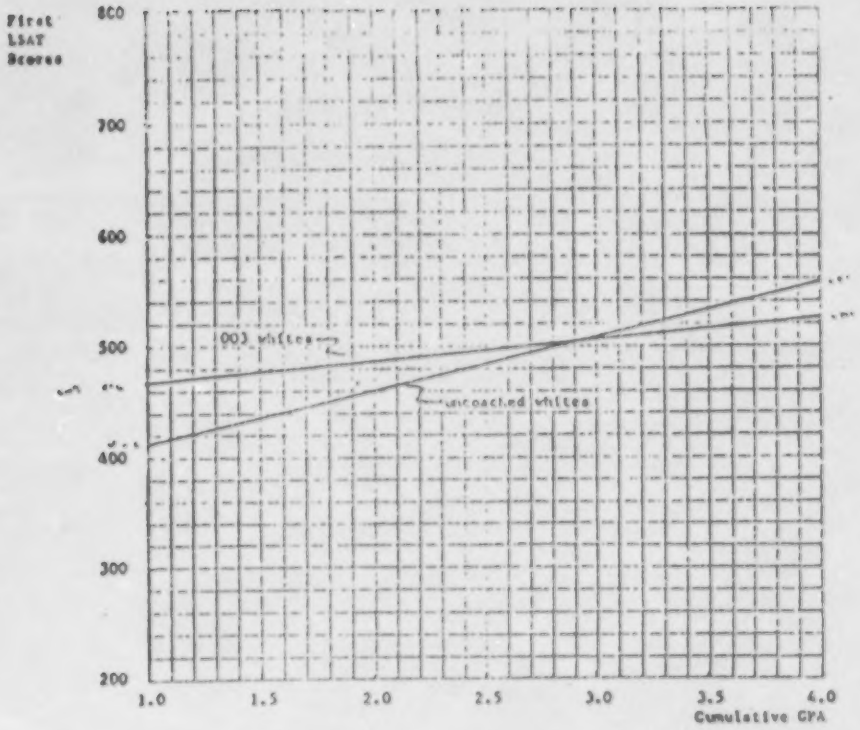
LSAT average scores for 2-time takers as a function of GPA, comparing second-LSAT scores for whites coached at 001 between [illegible] against second scores for uncoached whites



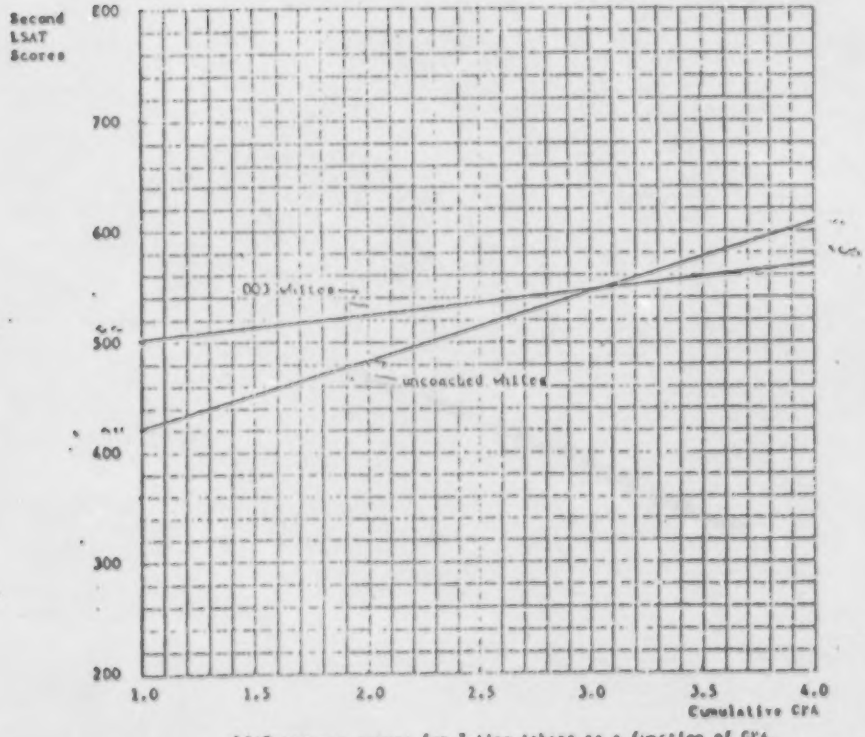
LSAT average scores for 2-time takers as a function of GPA, comparing first-LSAT scores for whites coached at 002 between exams against first-LSAT scores for uncoached whites



LSAT average scores for 2 time takers as a function of GPA, comparing second-LSAT scores for whites coached at 002 between exams against second-LSAT scores for uncoached whites

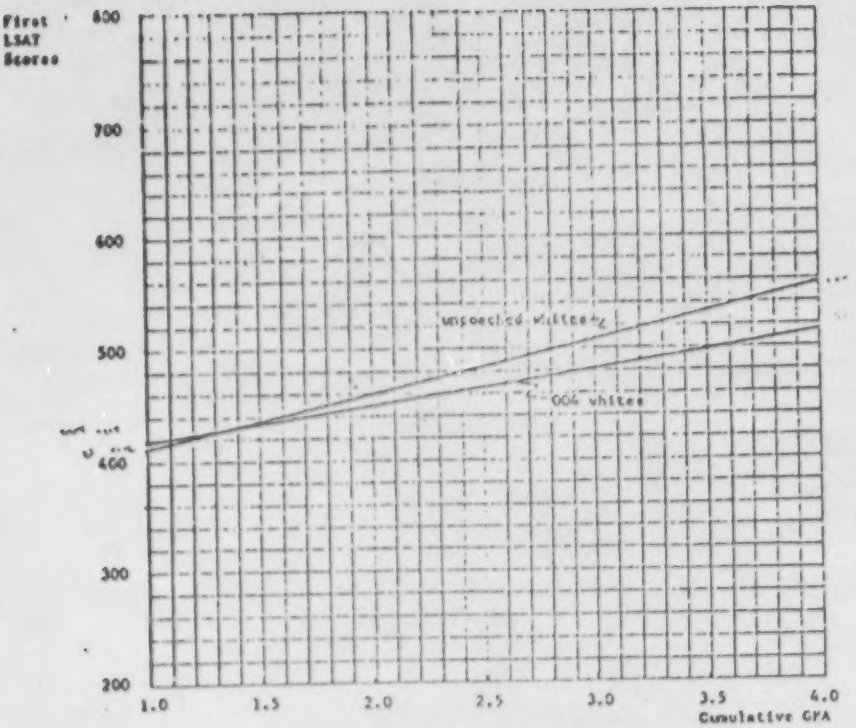


LSAT average scores for 7-time takers as a function of GPA, comparing first-LSAT scores for whites coached at 003 between exams against first-LSAT scores for uncoached whites

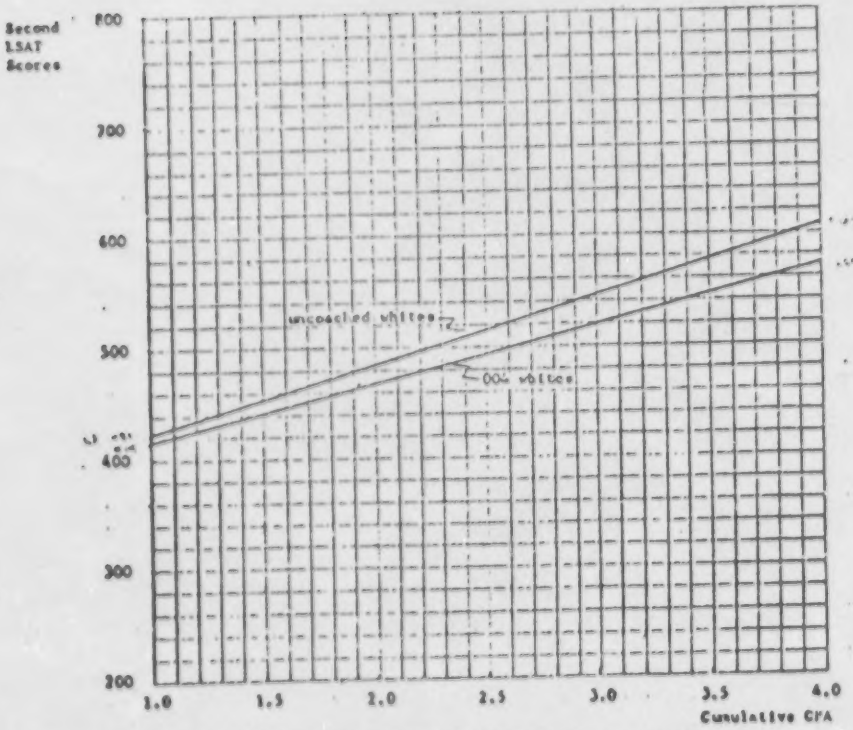


LSAT average scores for 7-time takers as a function of GPA, comparing second-LSAT scores for whites coached at 003 between exams against second-LSAT scores for uncoached whites

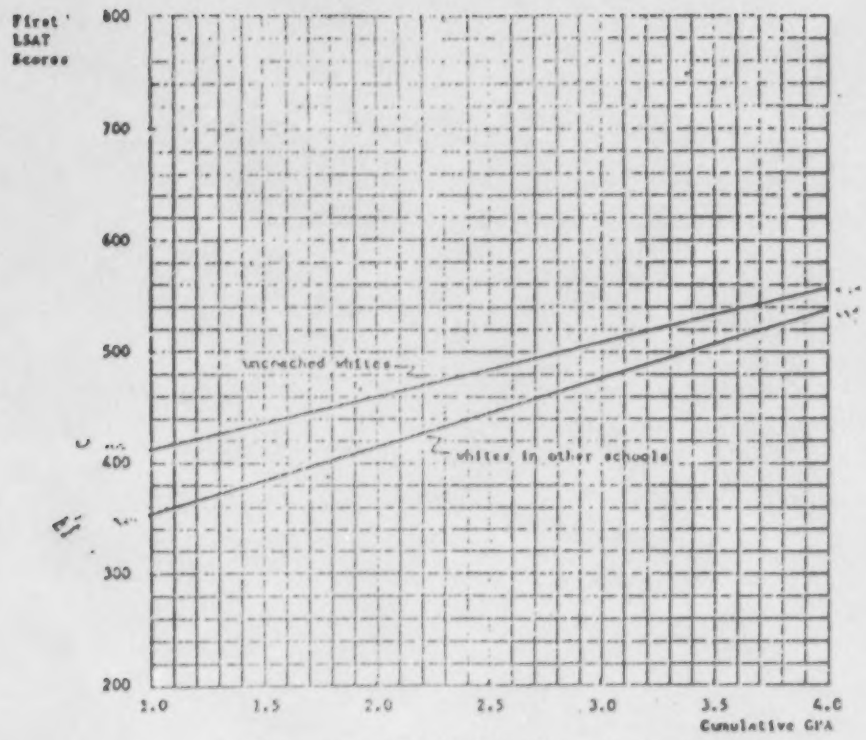
165



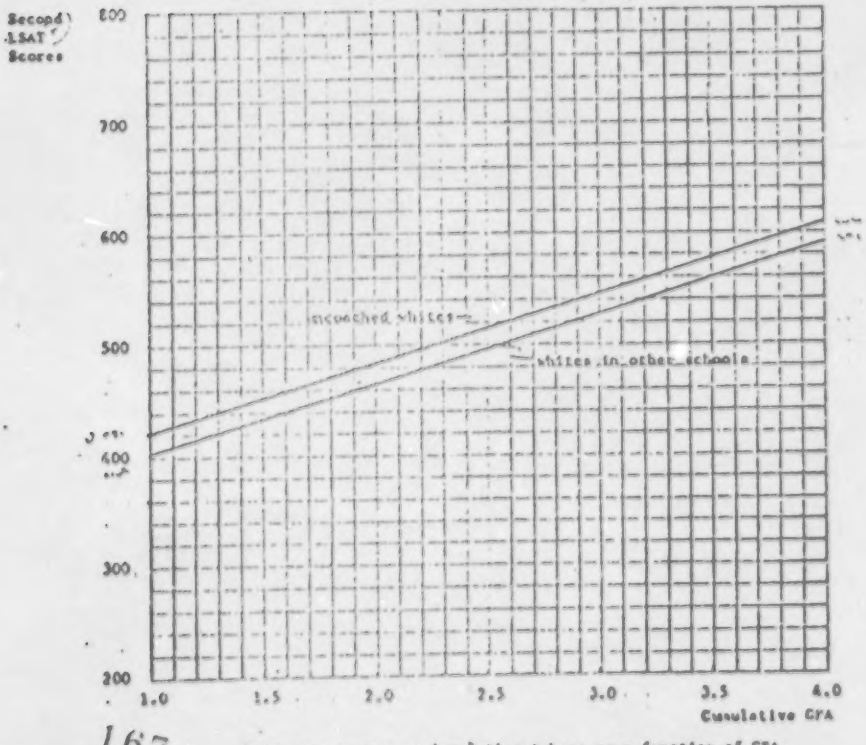
LSAT average scores for 2-time takers as a function of GPA, comparing first-LSAT scores for whites coached at 004 between exams against first-LSAT scores for uncoached whites



LSAT average scores for 2-time takers as a function of GPA, comparing second-LSAT scores for whites coached at 004 between exams against second-LSAT scores for uncoached whites



LSAT average scores for 2-time takers as a function of GPA, comparing first-LSAT scores for whites coached at other schools between exams against first-LSAT scores for uncoached whites



167

LSAT average scores for 2-time takers as a function of GPA, comparing second-LSAT scores for whites coached at other schools between exams against second-LSAT scores for uncoached whites

(8) LSAT first and second scores for 2-time takers coached between exams

This section displays second-LSAT scores as a function of first-LSAT scores and compares average LSAT scores by coaching school for coached and uncoached students.

All the major coaching schools SHK (001), Amity (002), Sexton's (003), and Evergreen (004) -- appear to benefit primarily students with initially low LSAT scores. The composite of small schools appears to offer fairly uniform benefits. The influence, if any, of self-selection is somewhat obscure. If self-selection were dominant, then we would expect to see greater gains for higher initial scores for SHK (001), Sexton's (003) and Evergreen (004). Instead, the average benefits are larger for lower initial LSAT scoring students. Similarly, the composite of small schools shows an almost uniform average benefit while self-selection would imply a greater benefit for lower initial scoring students. Only the pattern for Amity (002) is consistent with the theory of self-selection.

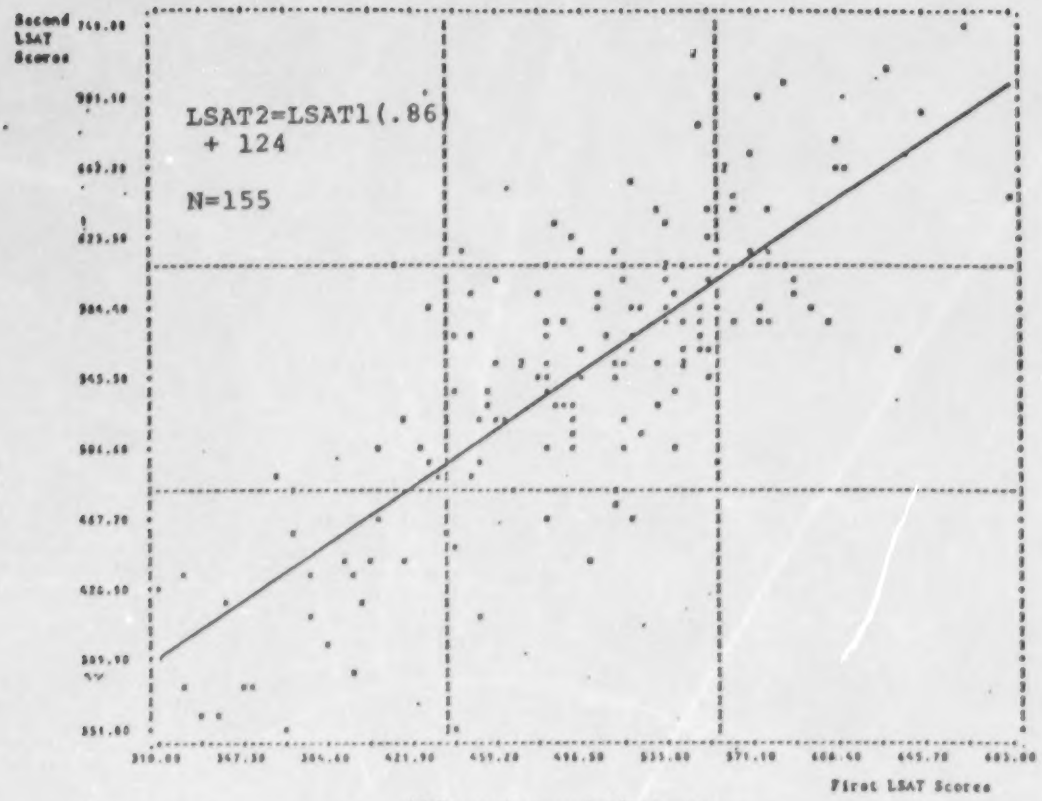
This section is an alternative method of demonstrating score increases for 2-time LSAT takers to the preceding section. Here the first LSAT score is the independent variable and the second LSAT score is dependent on it. In the preceding section the GPA is the independent variable and both LSAT scores are dependent variables.

The following table shows average conditional (theoretical) score changes assuming an initial score of 200 or 800 for the coaching schools and for the control (uncoached) group.

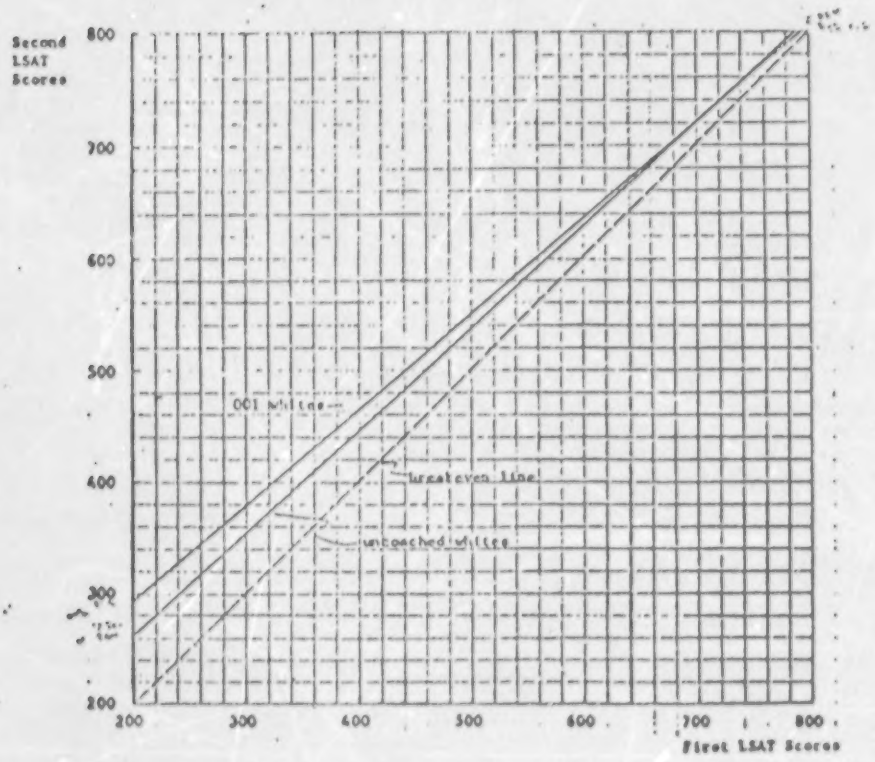
	200	800
001	+96	+12
002	+133	-5
003	+91	-11
004	+92	-28
Others	+81	+21
Uncoached	+63	+9

As this table indicates all the coaching schools increase scores at the lower bound with Amity (002) improving scores on the average by 70 points above the control group and by a gross increase of 133 points. The least effective organizations at the 200 initial score level are the composite group of small schools that show a net increase of 18 points and a gross increase of 81 points.

At the 800 level of initial LSAT score coaching would appear to serve little benefit or in some instances be a slight detriment. Of course our concerns are not at this highest level of initial score because individuals receiving the maximum score on their first attempt neither retake the examination nor enroll in a coaching school.

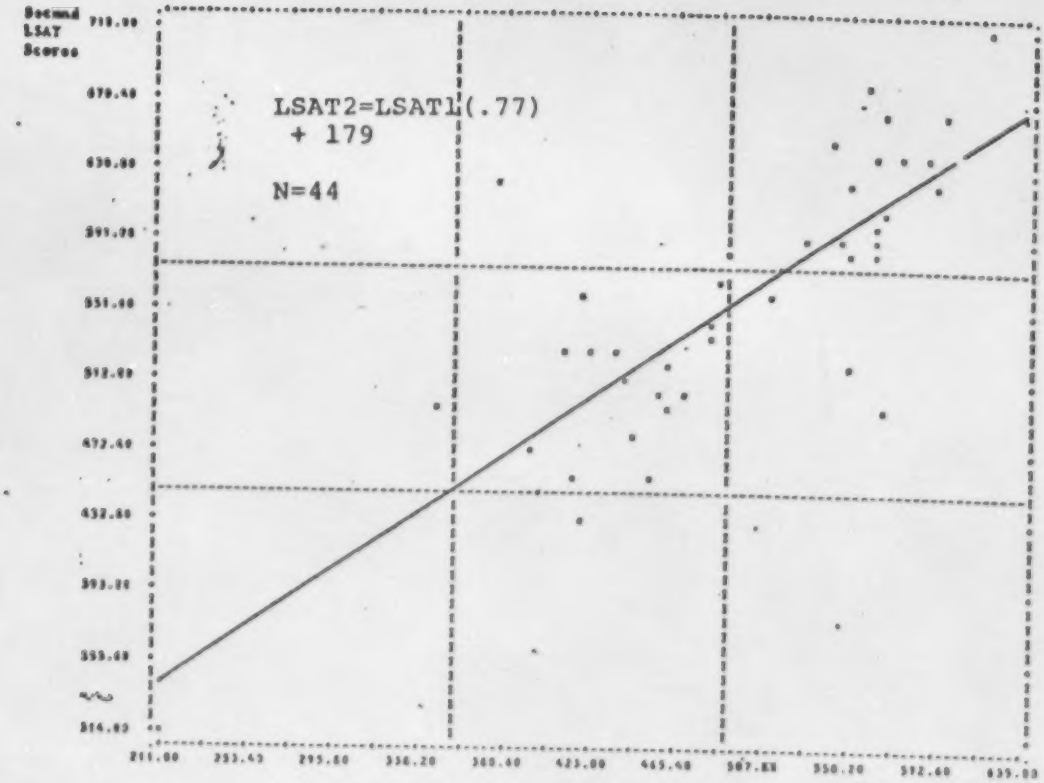


LSAT second scores for 2-time takers as a function of first scores for whites coached at COI between LSAT exams

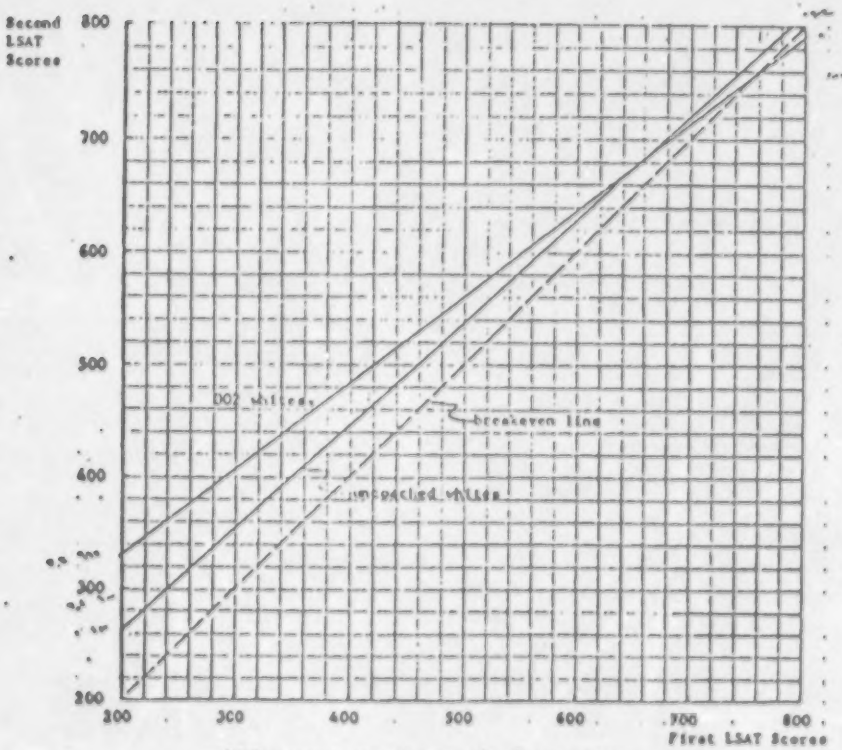


LSAT average second scores for 2-time takers as a function of first scores for whites coached at COI between LSAT exams, compared with uncoached white 2-time takers

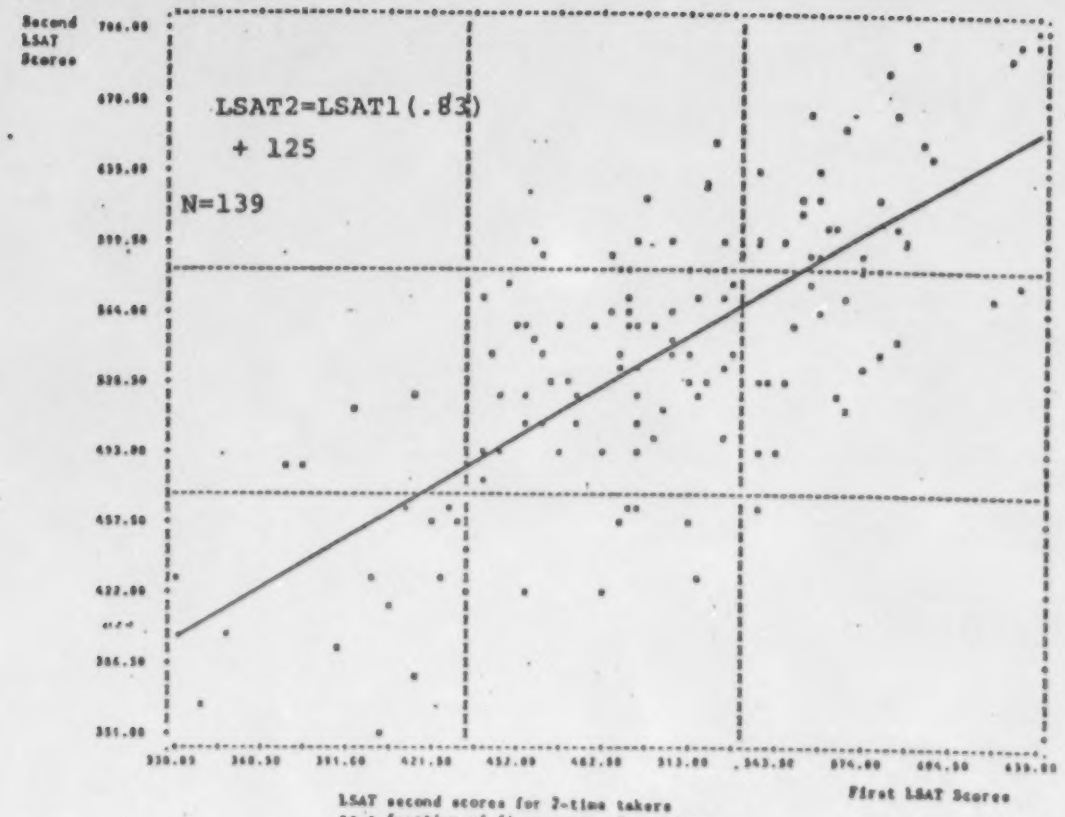
170



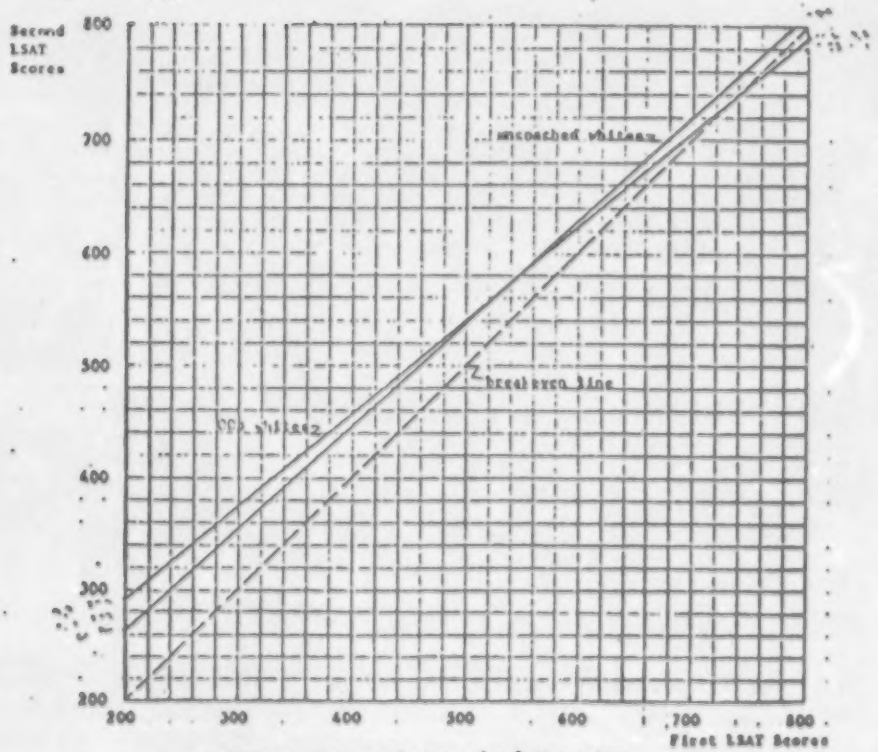
LSAT second scores for 2-time takers as a function of first scores for whites coached at 002 between LSAT exams



LSAT average second scores for 2-time takers as a function of first scores for whites coached at 002 between LSAT exams, compared with uncoached white 2-time takers

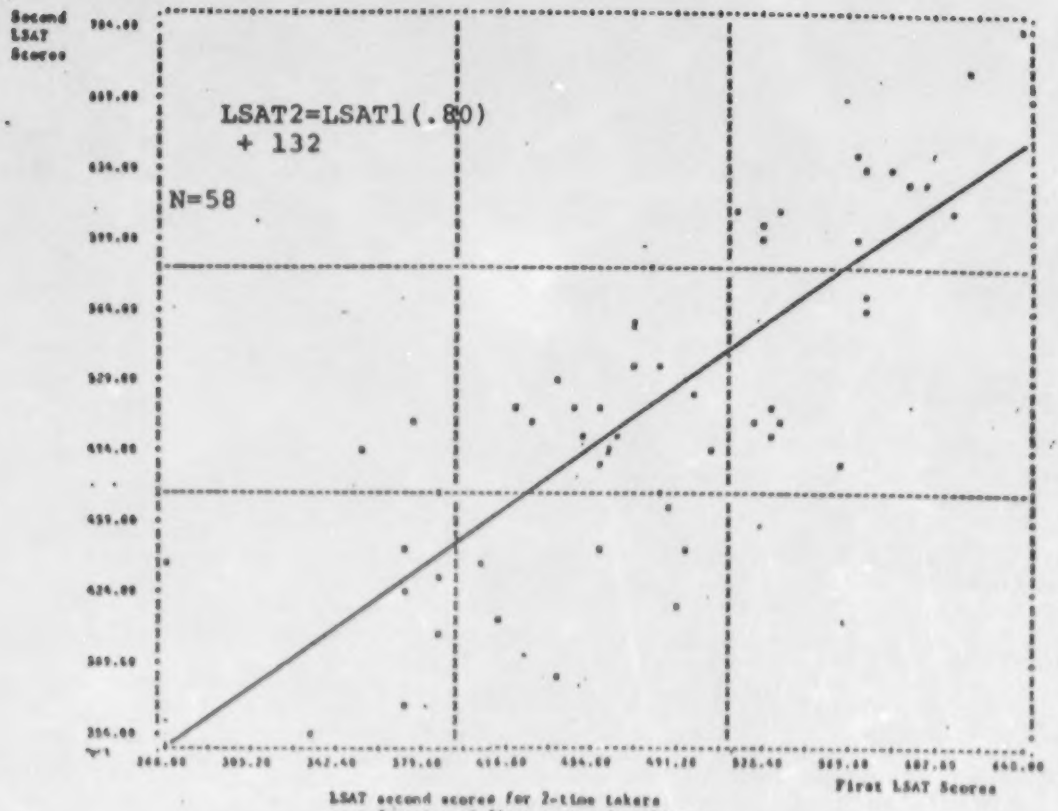


LSAT second scores for 2-time takers as a function of first scores for whites coached at 00) between LSAT exams

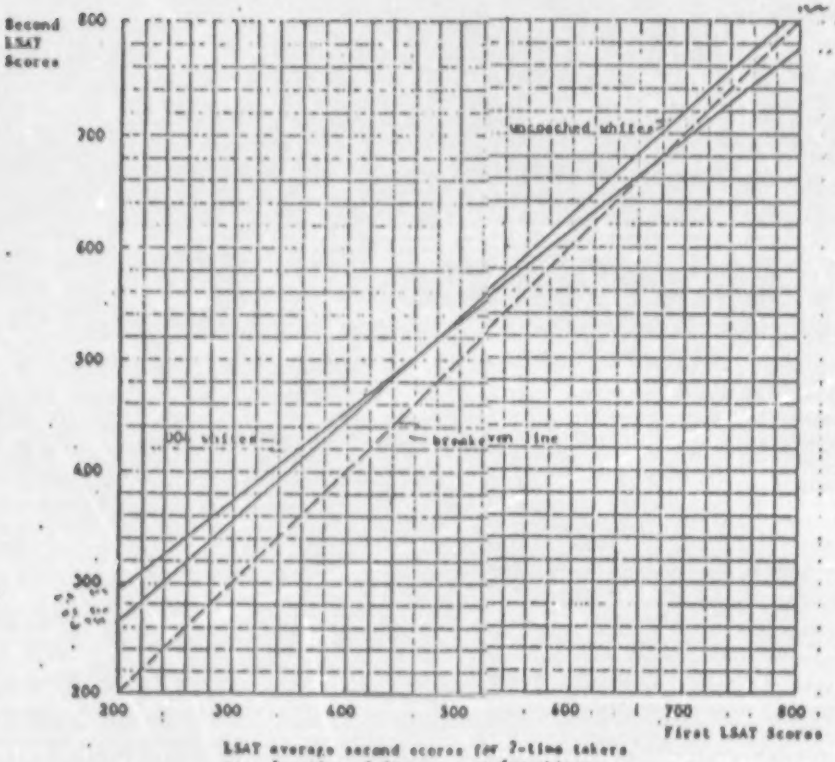


LSAT average second scores for 2-time takers as a function of first scores for whites coached at (0) between LSAT exams, compared with uncoached white 2-time takers

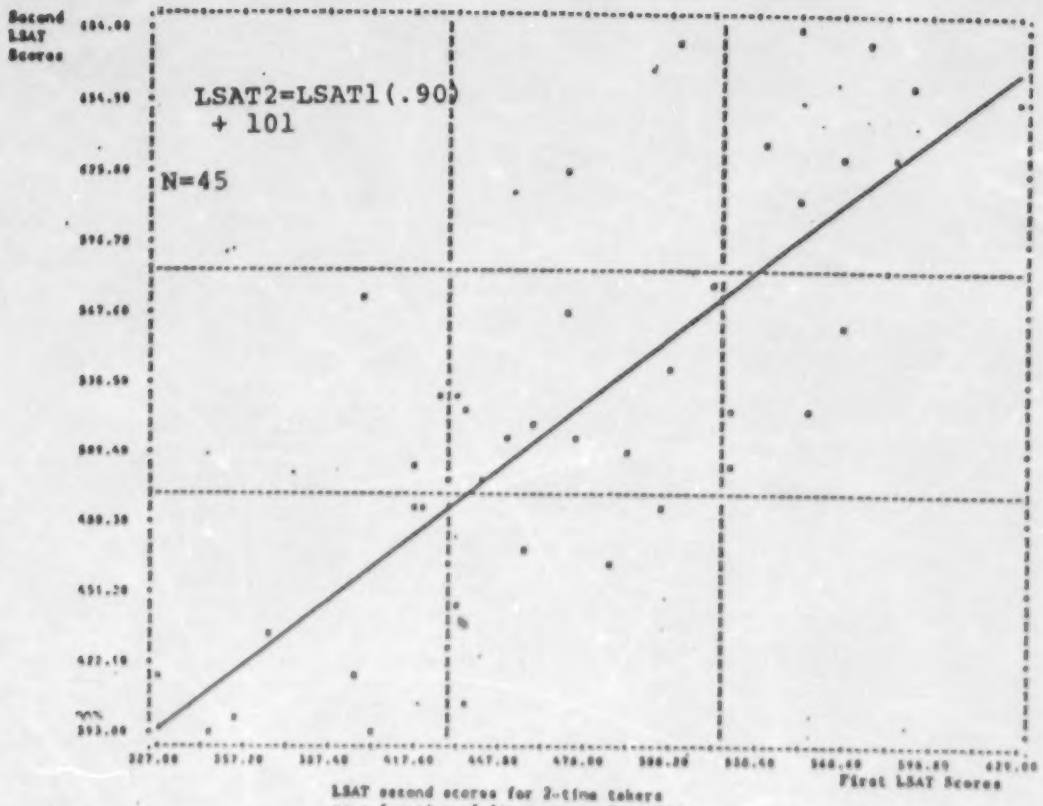
172



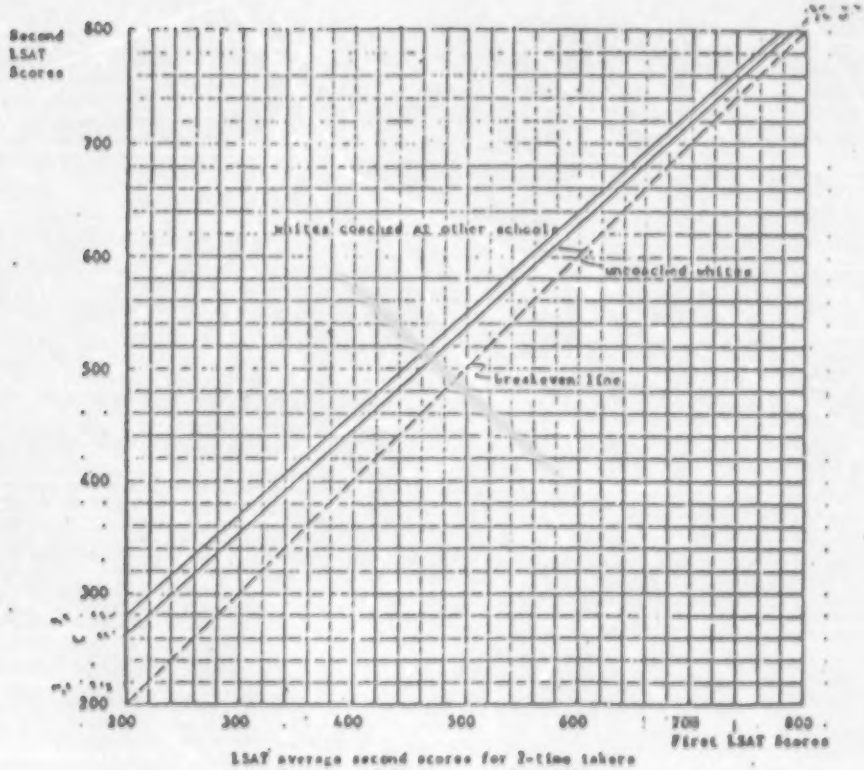
LSAT second scores for 2-time takers as a function of first scores for whites coached at 00% between LSAT exams



LSAT average second scores for 2-time takers as a function of first scores for whites coached at 00% between LSAT exams, compared with uncoached white 2-time takers



LSAT second scores for 2-time takers as a function of first scores for whites coached at remaining schools between LSAT exams



LSAT average second scores for 2-time takers as a function of first scores for whites coached at other schools between LSAT exams, compared with uncoached white 2-time takers

171

There is no one easy generalization that characterizes the effects of coaching for all the analyses we have displayed. Furthermore the analyses exhibited in this document are only one segment of the approaches we have undertaken. As we have already indicated, exploration of the technical appendices is mandatory for total comprehension although this document can and does stand alone.

The results of our analyses reveal that coaching is dramatically effective for the SAT. The LSAT, although susceptible to coaching in a general sense, does show areas where the effects are marginal. As we have indicated we believe part of the apparent lack of susceptibility of the LSAT to coaching is related to abnormally large control group increases and the relatively low correlation between GPA and LSAT scores. Furthermore the lack of consistency of GPA's both between and within undergraduate universities may be a contributing factor. Additionally we believe the gross score increases found when analyzing 2-time LSAT takers and using the first LSAT as the independent variable may be applicable to 1-time takers coached before the first LSAT. This would greatly increase the benefits received from LSAT coaching. We hope to look into some of these areas in the studies recommended, infra.

C. CASE HISTORIES

The case histories that follow are drawn from Technical Appendix M (Miscellaneous). Appendix M contains relevant data concerning all individuals who were either coached more than once or who took the LSAT more than twice. Technical Appendix M reflects testing histories of some individuals who have taken the LSAT five or more times and those of some individuals who have enrolled in multiple coaching courses, occasionally simultaneously.

Technical Appendix M is composed of the testing histories of those individuals who have probably suffered the greatest psychological trauma from the law school admission process. They have in some instances spent over $1000 in application fees over a three or four year period only to be rejected by every law school to which they applied.

The probability of acceptance to law school appears to diminish with the length of time one remains in the "admission process". Therefore any acceptances to law schools of individuals whose data appears in Technical Appendix M are not only surprising but emotionally gratifying.

The case histories that follow all have a portion of happiness as all the individuals ultimately were admitted to law school. They all were admitted after they had been rejected, gone to a coaching course, and increased their LSAT scores. Our study demonstrates that coaching is responsible

at least in part if not in full for the ultimate acceptance of all these individuals to law school. However, the fact that these individuals waited until they were into the admission process to enroll in a coaching course, rather than having taken a coaching course at the outset, may have caused them undue anguish and expense. They appear to have enrolled in a coaching course primarily out of desperation.

The case histories that follow perhaps articulate better than any other mode, although in anecdotal form, the personal costs and benefits of coaching.

STUDENT A

Student A, a history major at Bryn Mawr College, with a GPA of 2.10, took the LSAT in December 1974 receiving a score of 531, and in February 1975 receiving a score of 565. Student A applied to New York University Law School, Columbia University Law School, Fordham Law School, Rutgers Law School, Brooklyn Law School, Hofstra Law School, and St. John's Law School, for the class commencing in the fall of 1975. Student A was rejected by all these law schools.

Student A then enrolled at the Stanley H. Kaplan Educational Center in New York for the course prior to the July 1975 LSAT. After being coached Student A took the July 1975 LSAT and received a score of 665.

Student A then applied to Columbia Law School, New York University Law School, Fordham Law School, Rutgers Law

School, Brooklyn Law School, Hofstra Law School, and St. John's Law School. Student A was placed on the waiting list at Rutgers Law School and was admitted to both Brooklyn Law School and St. John's Law School. Student A registered at St. John's Law School for the class commencing in the fall of 1976.

STUDENT B

Student B, a major in social work at Syracuse University, with a GPA of 2.27, took the LSAT in July 1973 scoring 518 and in December 1974 scoring 511. Student B then applied to Fordham Law School for the class entering in the fall of 1975 and was rejected.

Student B then enrolled in John Sexton's LSAT Preparation Center prior to the October 1975 LSAT and received a score of 616 on the October 1975 LSAT.

Student B then applied to Fordham Law School, Temple Law School, American University Law School, and George Washington University Law School.

Student B was admitted to Fordham, Temple, and American University Law Schools and enrolled at Fordham Law School for the class commencing in the fall of 1976.

STUDENT C

Student C, a history major at McGill University, with no reported GPA, took John Sexton's LSAT Preparation Center course in New York prior to the July 1975 LSAT but did not take the LSAT until October 1975. Student C scored a 480 on

the October 1975 LSAT and a 516 on the February 1976 LSAT. Student C did not apply to any law schools for the class entering in the fall of 1976.

Student C was coached at the Stanley H. Kaplan Educational Center in New York prior to the December 1976 LSAT and received a score of 632 on that exam. Student C then applied to 18 law schools for admission to the class commencing in the fall of 1977.

Student C was accepted at Fordham Law School, Syracuse Law School and at the University of Pittsburgh Law School where Student C enrolled.

STUDENT D

Student D was a psychology major at the John Jay College of Criminal Justice with a GPA of 2.88. Student D enrolled in John Sexton's LSAT Preparation Center course for the December 1975 LSAT but did not take the LSAT until February 1976. Student D received a 437 on that exam.

Student D applied to Brooklyn Law School, New York Law School, New York University Law School, St. John's Law School, Fordham Law School and Pace University Law School for the class entering in the fall of 1976. Student D received no acceptances.

Student D then enrolled simultaneously at John Sexton's LSAT Preparation Center and the Law Boards Institute prior to the July 1976 LSAT. Student D scored 581 on the July

1976 LSAT. Student D reapplied to New York Law School, St. John's Law School and Pace Law School. Student D was admitted to Pace for the class commencing in the fall of 1977.

STUDENT E

Student E, a political science major at Wellesley College, with a GPA of 2.82, took the LSAT in October 1974 and December 1974 receiving scores of 402 and 424 respectively. Student E applied to 8 law schools for admission to the class commencing in the fall of 1975 and was rejected by all. Two of the schools where Student E was rejected were Georgetown University Law School and New York University Law School.

Student E enrolled in John Sexton's LSAT Preparation Center course prior to the December 1975 LSAT and received a score of 503 on the December 1975 LSAT. Student E then applied to 8 law schools including New York University and again was rejected by all 8.

Student E enrolled in the Stanley H. Kaplan Educational Center prior to the October 1976 LSAT. Student E took the December 1976 LSAT and February 1977 LSAT scoring 529 and 527 respectively. Student E then applied to 13 law schools. Student E was accepted at Rutgers Law School, Georgetown University Law School, and New York University Law School for the class commencing in the fall of 1977. Student E registered at New York University Law School.

STUDENT F

Student F, an english major at Manhattan College, with a GPA of 3.26, took the LSAT in December 1974 and February 1975 scoring 512 and 518 respectively. Student F then applied to 5 law schools for admission to the class commencing in the fall of 1975 and received no acceptances.

Student F retook the LSAT in December 1975 receiving a score of 530 but made no applications to law school for the class entering in the fall of 1976.

Student F enrolled in John Sexton's LSAT Preparation Center course prior to the October 1976 LSAT. Student F scored 582 on that exam. Student F then applied to 5 law schools for admission to the class commencing in the fall of 1977 and was accepted at Pace University Law School.

STUDENT G

Student G, an economics major at Queens College, with a GPA of 3.18, took the LSAT in April 1975 and scored 536. Student G applied to St. John's University Law School and was not accepted.

Student G then enrolled at John Sexton's LSAT Preparation Center prior to the July 1976 LSAT but did not take the exam. Student G next enrolled in the Stanley H. Kaplan Educational Center prior to the December 1976 LSAT on which Student G scored 649. Student G then applied to 8 law schools for the class commencing in the fall of

1977. Student G was accepted at 7 of these law schools and enrolled at St. John's University.

STUDENT H

Student H, a psychology major at Brooklyn College, with a GPA of 3.54, took the LSAT in December 1974, scoring 496. Student H applied to three law schools for the class commencing in the fall of 1975 and received no acceptances.

Student H enrolled in the Stanley H. Kaplan Educational Center prior to the October 1976 LSAT. Student H scored 621 on the October 1976 LSAT and applied to 8 law schools. Student H was rejected by 3 of these schools (Hofstra, Fordham, and New York University). However Student H was accepted at Brooklyn Law School, New York Law School, St. John's University Law School, SUNY at Buffalo Law School and Rutgers Law School.

Student H registered at Rutgers Law School for classes commencing in the fall of 1977.

STUDENT I

Student I, a sociology major at Hofstra University, with a GPA of 2.99, took the LSAT in December 1974 and February 1975 scoring 514 and 424 respectively. Student I applied to 8 law schools for admission to the class commencing in the fall of 1975 and was rejected by all. One of these schools was New York Law School.

Student I enrolled in the Stanley H. Kaplan Educational Center prior to the July 1975 LSAT. Student I took the July 1975 LSAT scoring 549 and the October 1975 LSAT scoring 590.

Student I applied to 2 law schools for the class commencing in the fall of 1976. Student I was accepted at New York Law School.

STUDENT J

Student J, a philosophy major at Harvard University, with a GPA of 2.98, took the LSAT in July 1974 and December 1974 receiving scores of 560 and 573 respectively.

Student J applied to 7 law schools (New York University, University of Pennsylvania, Cornell, Harvard, Fordham, Georgetown, and University of Virginia) for the class commencing in the fall of 1975. Student J was rejected at all 7.

Student J enrolled in the Stanley H. Kaplan Educational Center in New York prior to the October 1975 LSAT. Student J scored 618 on that exam.

Student J then applied to 15 law schools for the class commencing in the fall of 1976. Student J was placed on two waiting lists (Fordham and Rutgers) and was accepted at The Benjamin Cardozo School of Law.

STUDENT K

Student K, an economics major at Fordham, with a GPA of 3.15, took the LSAT in December 1974 and February 1975 scoring 482 and 518 respectively. Student K applied to 5 law schools

for the class entering in the fall of 1975 and was rejected by all 5 including New York Law School and Seton Hall University Law School.

Student K enrolled in John Sexton's LSAT Preparation Center prior to taking the December 1975 LSAT. Student K scored 569 on that exam.

Student K then proceeded to apply to 4 law schools for admission to the class commencing in the fall of 1976. Student K was admitted to two of these schools, New York Law School and Seton Hall University Law School.

STUDENT L

Student L, a social sciences major at Seton Hall University, with a grade point average of 2.79, took the LSAT in April 1973, December 1974, and February 1975. Student L received scores of 482, 430, and 489 respectively.

Student L made 6 applications for the law school class entering in the fall of 1975. Student L made 7 applications for the law school class entering in the fall of 1976. All 13 of these applications were rejected.

Prior to the October 1975 LSAT Student L was coached by the Law School Admission Test Review Course (Evergreen). Mysteriously, Student L did not take the LSAT until December 1976, scoring 586. Student L applied to six law schools for the class entering in the fall of 1977 and was accepted at the International School of Law.

STUDENT M

Student M, a business major with a 3.42 GPA at Saint Bernard College (Alabama), took the LSAT in October 1974 and December 1974 scoring 239 and 286 respectively.

Student M applied to eleven law schools, including Deleware Law School, for the class entering in the fall of 1975. Student M was rejected by all these law schools.

Student M enrolled in the Evergreen LSAT Review course prior to the October 1975 LSAT but did not take the LSAT until December 1976. Student M scored 477 on the December 1976 LSAT. Student M applied only to Deleware Law School for the class entering in the fall of 1977 and was accepted.

STUDENT N

Student N, a history major at Indiana University with a 2.68 GPA, took the LSAT in December 1972 and February 1974 scoring 391 and 444 respectively.

Student N applied to Chicago-Kent College of Law, John Marshall Law School, and Depaul University Law School for admission to the class commencing in the fall of 1975. Student N was rejected by all three schools.

Prior to the December 1976 LSAT, Student N was coached at the Amity Review Course in Chicago. Student N scored 534 on the December 1976 LSAT and applied to 5 law schools for admission to the class commencing in the fall of 1977.

Although rejected by Depaul and Chicago-Kent, Student N was accepted at the John Marshall Law School.

STUDENT O

Student O, a political science major at Valparaiso University (Indiana), with a 3.18 GPA, took the LSAT in October 1975 and December 1976 scoring 474 and 424 respectively.

Student O applied to Valparaiso University Law School and Loyola University Law School of Chicago for the class commencing in the fall of 1976. Student O was rejected by both of these schools.

Student O then enrolled at Test Prep in Chicago prior to the December 1976 LSAT. Student O took the February 1977 LSAT scoring 517.

Student O, although rejected at Valparaiso University Law School and John Marshall Law School for the class entering in the fall of 1977, was accepted at Lewis University Law School, Loyola University Law School (New Orleans), and Hamline University School of Law.

STUDENT P

Student P, a psychology major at University of California at Los Angeles (UCLA), with a GPA of 3.30, took the December 1975 LSAT scoring 591.

Student P applied to UCLA Law School and Harvard Law School and was not admitted by either, for the class com-

mencing in the fall of 1976. Student P then simultaneously enrolled in both the Stanley H. Kaplan Educational Center and the Amity Review Course in Los Angeles prior to the December 1976 LSAT.

Student P scored 712 on the December 1976 LSAT and applied to 10 law schools for admission to the class commencing in the fall of 1977. Although again rejected at UCLA and Harvard, Student P was accepted at the University of San Diego Law School and the University of California at Davis where Student P enrolled.

STUDENT Q

Student Q, a biology major at UCLA with a GPA of 3.08, took the LSAT in July 1974 and December 1974, scoring 438 and 479 respectively.

Student Q applied to 6 law schools for admission to the class commencing in the fall of 1975. Student Q was rejected by all 6 schools.

Student Q enrolled in the Law School Admission Test Review Course (Evergreen) in Los Angeles prior to the October 1975 LSAT. Student Q scored 529 on the October 1975 LSAT.

Student Q then applied to 3 law schools for admission to the class commencing in the fall of 1976. Although rejected at Loyola University (Los Angeles), Student Q was accepted at both Southwestern University Law School, and Whittier College - Beverly School of Law.

IX. ACTS AND PRACTICES OF COACHING SCHOOLS

All coaching schools make claims or have made claims regarding their ability to improve scores on standardized admission examinations. Some claims are blatant, others are subtle. However, they all have the same purpose -- to convey to the student (or parents of students) that taking a coaching course will increase an individual's score on an examination that may well be the most important examination that person ever takes.

These claims appear in national newspapers of general circulation, in college and high school newspapers, 66/ in posters hanging on campus bulletin boards, in radio advertisements, in brochures distributed to students and parents, in mailed circulars, in speeches, and in such other diverse places as bowling alley score sheets.67/

A representative sample of claims made by the coaching schools, and the coaching school making each claim follows:

> thousands have earned increases of a hundred points or more in their scores 68/
>
> Stanley H. Kaplan Educational Center

66/ See generally, Category III File 772 3000, Vol. III, p. 51-61, for a sampling of newspaper advertisements.

67/ Category III File 762 3033, Vol. IV, p.50.

68/ Category III File 762 3033, Vol. I, p.1.

most effective course available

the resulting competence and confidence will allow you to perform at your maximum potential 69/

Stanley H. Kaplan Educational Center

from the reports we have received we have found there is an average increase of 50 to 100 points for test repeaters 70/

Stanley H. Kaplan Educational Center

...achieved such dramatic results that many national magazines have written articles about our success 71/

Stanley H. Kaplan Educational Center

we teach twice as many students as any other course in the metropolitan New York/New Jersey area 72/

John Sexton's LSAT Preparation Center

The LSAT Preparation Center is the only institution devoting its attention exclusively to the LSAT 73/

John Sexton's LSAT Preparation Center

the scores of many of our students have jumped 250 points or more 74/

John Sexton's LSAT Preparation Center

69/ Category III File 762 3033, Vol. I, p.9.

70/ Category III File 762 3033, Vol. I of Investigational Hearing Exhibits, Exhibit 5. This statement was made in a speech by a representative of the Stanley H. Kaplan Educational Centers, Ltd. to the Black American Law Students Association of George Washington University.

71/ Category III File 762 3033, Vol. IV, p.42.

72/ Category III File 772 3000, Vol. XV, p. 21.

73/ Category III File 772 3000, John Sexton Physical Exhibit C, p.4.

74/ Id. at 12.

the average score of its students greatly exceeds the national median 75/

John Sexton's LSAT Preparation Center

the average score of our students is one-third higher than the national average 76/

John Sexton's LSAT Preparation Center

the median increase for our students who have previous scores is over 100 points 77/

John Sexton's LSAT Preparation Center

no other course can demonstrate better results than ours 78/

Evergreen LSAT Review Course

thousands of successful students prove we significantly increase scores 79/

Evergreen LSAT Review Course

since 1968 we've helped over 10,000 students gain admission to law school 80/

Evergreen LSAT Review Course

October LSAT average for those taking the course was 630 81/

LSAT Review Course of Massachusetts

75/ Id. at 13.

76/ Id.

77/ Id.

78/ Category III File 772 3000, Vol. XLIX, p.131.

79/ Id. at 132.

80/ Id. at 134.

81/ Category III File 772 3000, Vol. LIII, p.37.

Follow-ups show that our average student increases his LSAT score over 80 points with some achieving a nearly 200 point increase, demonstrating the course's capacity for enabling you to maximize your score within your ability 82/

Law Board Review Course

...it will add crucial points to your test scores THE POINTS THAT MAY WELL GET YOU OVER THE THRESHOLD OF SUCCESS 83/

Columbia Test Preparation Institute

the average increase of students who take our course is 80 points with some improving as much as 150 points 84/

Rutgers Review Course

...if an average improvement of 30 points results merely from having taken the test before, a still greater score advantage would be expected to follow an effective instructional program... 85/

Amity LSAT Review

...the LSAT METHOD can help you make your first LSAT score your best score.86/

LSAT Method

the Seminar equips the law school candidate with test taking skills essential for maximizing performance on the LSAT 87/

Western States Review

82/ Category III File 772 3000, Vol. XXVII, p.115.

83/ Category III File 772 3000, Vol. XLVI, p.117.

84/ Category III File 772 3000, Vol. XXVI, p.16.

85/ Category III File 772 3000, Vol. XXXII, p.117.

86/ Category III File 772 3000, Vol. LIV, p.42.

87/ Category III File 772 3000, Vol. XXXIV, p.99.

Even if the coaching schools made no advertising claims their corporate names are implicit if not explicit representations that they serve some affirmative benefit in preparation for standardized admission examinations.

The use of the words "coach", "cram", "review", "educate", "prepare", and words of similar import convey to the person perceiving them that test takers will achieve some affirmative benefit by attending the course. This is corroborated by consumer testimony, the testimony of coaching school proprietors, and the perceptions of guidance counsellors and educators.

The coaching schools' claims are not limited to effectiveness in raising scores. The schools claim to have superior curricula, 88/ small class sizes, 89/ experienced faculty who have scored high on standardized examinations, 90/ and extensive classroom and homework materials that are continuously updated to match the most recent standardized examinations.91/ These claims are of course all ancillary to the claim of effectiveness in increasing score.

88/ Category III File 772 3000, Vol. XLIX, p.131.

89/ Category III File 772 3000, Vol. XXXII, p.99.

90/ Category III File 772 3000, John Sexton Physical Exhibit C, p.8, 16-17.

91/ Category III File 762 3033, Vol. I, p.1.